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ANNUAL POLYCHLORINATED BIPHENYL ACTION SUMMARY REPORT

Project No. 1998002.331 Task 006
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Prepared for:

Bodycote

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Melrose Park, Illinois

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ACKNOWLEDGEMENT

This *Annual Polychlorinated Biphenyl Action Summary Report* for the Site located at 1975 North Ruby Street in Melrose Park, Illinois has been prepared for the sole and exclusive use of Bodycote Thermal Processing, Inc. This report is subject to and issued in connection with the Letter-Agreements dated July 15, 2014. Any use or reliance upon information provided in this report, without the specific written authorization of Bodycote Thermal Processing, Inc. and Mabbett & Associates, Inc. shall be at the User's sole risk. No attempt has been made to assess the compliance status of any past or present Owner or Operator of the Property with any Federal, state, or local laws or regulations except as described herein with respect to this particular project.

The findings, observations, and conclusions presented in this report, including the extent of subsurface explorations and other tests, are limited by the scope of services outlined in our Letter-Agreements which reflect schedule and budgetary constraints. The professional opinions and findings presented in this report are based on the facts and information conveyed to or observed by Mabbett & Associates, Inc. during completion of this project. Furthermore, assessment and field operations have been performed in accordance with generally accepted engineering practices. No other warranty, expressed or implied, is made.

The assessment presented in this report is based solely upon the laws and regulations existing as of the date of this report as well as the information gathered to date including a limited number of subsurface explorations made on the dates indicated and performed by others. Should further environmental or other relevant information be developed at a later date, Bodycote Thermal Processing, Inc. should bring such information to the attention of Mabbett & Associates, Inc. as soon as possible. Based upon an evaluation, Mabbett & Associates, Inc. may modify this report and its conclusions.

This report was prepared by the following Mabbett & Associates, Inc. personnel:

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TABLE OF CONTENTS

I. INTRODUCTION

Mabbett & Associates, Inc. (Mabbett®) has prepared this Annual Polychlorinated Biphenyl (PCB) Action Summary Report on behalf of our client, Bodycote Thermal Processing, Inc. (Bodycote), for the Site located at 1975 North Ruby Street in Melrose Park, Illinois. This summary report has been prepared in accordance with 40 CFR 761, the Polychlorinated Biphenyl Action/Work Plan dated September 12, 2006, and the Polychlorinated Biphenyl Action/Work Plan Amendment letter approved by EPA on March 1, 2010.

The presence of PCB contamination in groundwater and non-aqueous phase liquid (NAPL) beneath the Heat Treat Building (HTB) within a portion of the Bodycote facility was identified in 2000. Source investigations and analytical sampling that define the nature and extent of PCB contamination have been ongoing since that time. The following sections discuss the data collected and PCB actions taken during 2014 as part of the Site's approved PCB Action/Work Plan.

II. DISPOSAL SITE DESCRIPTION

The Bodycote facility is an industrial complex located at 1975 North Ruby Street in Melrose Park, Illinois. The facility was constructed in the 1950s and has been the site of heat treating operations since that time. The property is located in an industrial zoned area and is planned for continued use as a manufacturing facility into the foreseeable future. A Site Locus, Site Map, and a Monitoring Well Location Plan are provided as Drawings L-1a, L-1b, and L-2, respectively.

III. SITE HISTORY

The presence of PCBs beneath the Bodycote HTB was discovered in May 2000 during routine profiling of groundwater and dense non-aqueous phase liquid (DNAPL) associated with remedial efforts to remove free product from on-site well M&A-113 (refer to Drawing L-2). Of the nine drums that were profiled for off-site disposal, eight had detectable concentrations of Aroclor 1248 ranging from 341 milligrams per kilogram (mg/kg) to 516 mg/kg. These detections were above applicable state and federal standards for PCBs.

In response to the May 2000 PCB detections, Mabbett initiated an in-depth review of available documentation for the property in order to identify potential sources of PCB contamination at the Site. Mabbett reviewed records at the Bodycote facility, the State Fire Marshall, the Village of Melrose Park Fire Department, the Village of Melrose Park Building Department, and Village of Melrose Park Health Office; however, no records were located which documented PCB use, spills, or the presence of PCB containing equipment at the Site. Bodycote personnel were also interviewed for their knowledge regarding PCB spills or PCB containing equipment at the facility, but no known PCB spills or PCB containing equipment was identified to the best of the personnel's knowledge.

During September 2000, Mabbett sampled non-aqueous phase liquid (NAPL) occurring in monitoring wells M&A-113 and M&A-111; those samples were analyzed for PCBs. Laboratory results indicated the presence of Aroclor 1248 at concentrations of 1,600 mg/kg and 3,308 mg/kg, respectively. Upon further corroboration of laboratory results, Mabbett conducted a round of groundwater sampling in October 2002. Samples were collected from seven monitoring wells located in the Heat Treat Building and submitted for laboratory analysis of PCBs in accordance with United States Environmental Protection Agency (EPA) Test Method 8082.

PCBs were detected in groundwater samples collected from four of the seven monitoring wells at concentrations between 1.6 micrograms per liter (µg/L) and 600 µg/L. The Illinois Environmental Protection

Agency (IEPA) TACO Tier I Class II (restricted use) groundwater standard for PCBs is 2.5 µg/L.

Between 2002 and 2006, Mabbett conducted additional groundwater and NAPL sampling in an effort to obtain additional data for the purpose of formulating a PCB Action/Work Plan. During this time, low flow sampling methods were used to reduce sample turbidity; this allowed the field team to obtain more representative samples to evaluate dissolved PCB concentrations. The resulting analytical results were significantly lower using the revised and more appropriate sampling techniques. The results of the PCB sampling events are summarized in Tables 1 and 2. NAPL recovery efforts initiated at the Site under the IEPA Voluntary Cleanup Program (VCP) are removing TCE mass from the subsurface and may also be contributing to the lower PCB concentrations observed during recent sampling events.

In October 2005, Mabbett contacted Ms. Pricilla Fonseca (Region V EPA) to establish the actions necessary to address the identified PCBs at the facility. Ms. Fonseca informed Mabbett that Bodycote needed to file a "Notice of PCB Activity" (Form #7710-53) and a PCB Action/Work Plan with the EPA. Form #7710-53 was filed on November 8, 2005. A PCB Action/Work Plan was submitted on September 12, 2006 and proposed the following:

- Install additional monitoring wells in the northwest region of the Heat Treat Building and outside the northwestern wall of the Heat Treat Building to confirm the extent of PCB contamination;
- Continue NAPL recovery efforts initiated under the IEPA approved VCP; continued removal of light non-aqueous phase liquid (LNAPL) and DNAPL was expected to result in further reductions in PCB concentrations at the Site;
- Maintain constructed engineered barriers, utilizing existing concrete slab flooring, over areas of residual soil impacts to eliminate potential exposure; and
- Conduct ongoing periodic training of Bodycote personnel in appropriate PCB waste management procedures.

On November 15, 2006, Mabbett personnel oversaw the advancement of three soil borings in and around the northwestern portion of the HTB for the purpose of delineating the extent of PCBs. The soil borings were advanced by Precon Drilling, Inc. of Addison, Illinois using hollow stem auger drilling techniques. The soil borings were completed with 2-inch diameter monitoring wells and designated M&A-130, M&A-131, and M&A-133 (refer to Drawing L-2).

Monitoring wells M&A-130 and M&A-131 are located outside of the Heat Treat Building along Ruby Street. Shallow monitoring well M&A-130 was advanced to 16 feet below ground surface (bgs) with a 10-foot screen interval located between 5 and 15 feet bgs. Intermediate monitoring well M&A-131 was advanced to 30 feet bgs with a 10-foot screen interval located between 19 and 29 feet bgs. Soils encountered during the advancement of these monitoring wells were generally clays with some silt and gravel. Visual or olfactory indicators of contamination were not observed in either of the boreholes located outside the Heat Treat Building.

Monitoring well M&A-133 is located in the northwest corner of the Heat Treat Building and is an intermediate well advanced to 30 feet bgs. The monitoring well is screened between 19 and 29 feet bgs. Soils encountered in the boring consisted of approximately 9 feet of fill material underlain by clays. Visual and olfactory screening of the soils did not indicate the presence of contaminants.

Mabbett collected groundwater samples from newly installed monitoring wells M&A-131 and M&A-133 (designated Outside-I and Inside-I, respectively on the laboratory report) on December 19, 2006. Monitoring well M&A-130 could not be sampled due to the lack of groundwater recharge into the well. Groundwater samples were submitted to TestAmerica Analytical Testing Corporation (TestAmerica) of Nashville, Tennessee for analysis of PCBs in accordance with EPA Test Method 8082. PCBs were not detected at concentrations greater than laboratory reporting limits in groundwater samples collected from monitoring wells M&A-131 and M&A-133.

PCB actions taken at the Bodycote facility since the submittal of the PCB Action Summary Report in December 2013 are summarized in the following sections.

IV. PCB ACTIONS

A. PCB Storage Area

In accordance with 40 CFR 761.65, Bodycote is required to have a hazardous waste storage area at the facility that is designed for PCB wastes if waste materials contain 50 parts per million (ppm) or greater of PCBs. A waste accumulation area has been established in the HTB. The accumulation area generally contains two to three 55-gallon drums including one for NAPL containing materials such as absorbent socks and bailers used for manual product removal, one for DNAPL extracted from monitoring well M&A-113, and one for LNAPL removed from monitoring well M&A-114. The drums are situated on secondary containment pallets with a storage capacity greater than 55 gallons. When these drums are full they are moved to the Hazardous Waste Storage Area and labeled with the applicable waste codes and the words "CONTAINS PCBs" on a hazardous waste label. All PCB containing wastes at the Bodycote facility are disposed of within 90 days of their storage start date in accordance with 40 CFR 761.65.

There has not been any disposal of remediation waste associated with the DNAPL recovery system, or the HTB groundwater monitoring program since May of 2013 (described in the 2013 PCB Annual Report). The waste accumulation area was inspected periodically throughout 2014 (most recently in mid-December) and two 55 gallon drums are present. One drum contains waste from the DNAPL recovery system (approximately 50% full) and the second drum contains NAPL containing material (i.e. oil absorbent socks – approximately 60% full). Neither drum was at capacity as of the site visit in December 2014; when they are at capacity they will be taken offline and stored in the hazardous waste storage area to await proper disposal.

B. Groundwater Sampling

PCB sampling was performed at thirteen (13) groundwater monitoring well locations during routine Semi-Annual Sampling Events. Sampling was conducted in accordance with the EPA PCB Action/Work Plan approval letter dated March 1, 2010. Mabbett personnel were unable to collect a groundwater sample from M&A-114 during the April 2014 event due to the lack of water in the well.

Table 1 presents historic and current PCB data for all wells identified in the approval conditions of the U.S. EPA's March 1, 2010 approval letter. Previously submitted Annual PCB Reports contain historic PCB data for samples of groundwater and NAPL collected from wells not listed in the approval conditions of the March 1, 2010 EPA approval letter. In general, concentrations of PCBs detected at the Site have decreased significantly since their discovery in May 2000. Additional discussion regarding the nature and extent of PCBs in groundwater at the Bodycote facility is provided in Section V.

V. NATURE AND EXTENT OF PCB CONTAMINATION

Based on recent PCB data for the HTB (provided in Table 1), PCBs appear to be limited to groundwater in the vicinity of monitoring wells M&A-104, M&A-110, M&A-111, M&A-112, M&A-113, and M&A-114 (it should be noted that PCBs have not been detected in M&A-104 since April of 2011 and in M&A-110 since October of 2012). As indicated in Table 1, detected concentrations of PCBs in groundwater beneath the HTB have been below the IEPA TACO Tier I Class II (restricted use) Groundwater Standard of 2.5 µg/L since the spring of 2006 sampling event with the exception of wells M&A-111, M&A-112, M&A-113, and M&A-114.

Drawing L-3 depicts the area of PCB groundwater contamination beneath the HTB in 2014. PCBs were detected in samples collected from only two wells at levels greater than the IEPA GRO in 2014; M&A-112 at a concentration of 7.03 µg/L in April 2014 and M&A-113 at a concentration of 4,030 µg/L in October 2014. Monitoring well M&A-113 is the location of the DNAPL extraction system and at the time of the monitoring event it is possible that trace amounts of DNAPL may have been present in the sample thus a potential reason for the high concentration at that location.

The absence of PCBs in groundwater at downgradient boundary wells M&A-122 and M&A-301 indicate that the likelihood for migration of PCB contaminated groundwater in a westerly direction off the property is minimal (refer to Drawing L-4 Heat Treat Building Shallow Groundwater Contours).

VI. SUMMARY

Groundwater samples have been collected and analyzed for PCBs over the past several years from monitoring wells located throughout the Heat Treat Building in an effort to identify a source of PCB contamination at the Site. The distribution of PCB contamination has been defined as a limited area beneath a portion of the Heat Treat Building of the Bodycote facility where NAPL is present. Dissolved concentrations of PCBs in groundwater have declined significantly since the discovery of PCBs at the Site in 2000 and, with the exception of wells M&A-111, M&A-112, M&A-113, and M&A-114, have been below applicable IEPA TACO Tier I Standards since 2006. The aforementioned wells, with the exception of M&A-112, have historically contained NAPL (M&A-111 and M&A-114) or currently contain NAPL (M&A-113). Groundwater monitoring well M&A-112 is a shallow well immediately adjacent to M&A-113 (an intermediate well).

NAPL recovery efforts in the Heat Treat Building are ongoing and appear to have reduced the occurrence of NAPL in this portion of the Site to only the area around monitoring well M&A-113. Continuing to remove free product to the extent practicable in these areas appears to be the most effective means of achieving additional PCB reductions in the Heat Treat Building.

VII. FURTHER EXPLORATION/REMEDIAL ACTIONS

Based on the information collected to date, Mabbett recommends continued NAPL removal as the primary course of action for reducing PCB contamination at the Site. The *in situ* DNAPL extraction system located in well M&A-113 will continue to operate on a full-time basis in accordance with the VCP established for the Heat Treat Building.

Mabbett recently completed an IEPA approved Free Product Recharge Study in regards to LNAPL in well M&A-111. LNAPL has been absent in the well for several years. As such Mabbett performed quarterly gauging events and determined that LNAPL had been removed to the maximum extent practicable. Mabbett submitted a Free Product Recharge Study Completion Report to the IEPA in August 2014. Based on the results obtained in the study the IEPA issued a letter on September 29, 2014, stating that LNAPL recovery

efforts at M&A-111 can cease based on the lack of LNAPL at that location however the well location must remain in place and continue to serve as a groundwater sampling location. In addition LNAPL has been absent in monitoring well M&A-114 for over a year. As such, in coordination with the IEPA, Mabbett initiated a Free Product Recharge Study at this location in the summer of 2014. Should LNAPL remain absent for a period of one year Mabbett will file for *No Further Remediation* status for this location.

Mabbett will continue to perform long term groundwater monitoring to coincide with the April and October semi-annual sampling events established under the VCP. PCB Summary Reports will be submitted to the EPA on an annual basis until such time that a status of *No Further Remediation* has been issued for PCB contamination at the Site.

Based on the information presented herein, it is Mabbett's opinion that:

1. No active PCB release sources are present and, based on diligent research, no historic sources for PCBs have been identified.

2. The presence of PCBs appears to be associated with DNAPL and is limited in extent.

3. Groundwater quality appears to meet the IEPA standard for PCBs of 2.5 µg/L outside a limited and well-defined area.

4. The extent of PCBs in the subsurface has been reasonably delineated.

5. PCBs do not appear to be migrating and based on site data, the potential for significant PCB migration is low.

6. Ongoing efforts to remove NAPL under the approved IEPA VCP also appear to be the most appropriate remediation strategy for PCBs.

7. No further investigation or additional remediation appears warranted at this time.

TABLES

TABLE 1
HISTORIC AND CURRENT PCB RESULTS SUMMARY
2014 ANNUAL PCB REPORT
BODYCOTE THERMAL PROCESSING
MELROSE PARK, IL

GW Samples			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
IEPA TACO Tier I Standard			2.5	2.5	2.5	2.5	2.5	2.5	2.5
WELL	AQUIFER	DATE	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MCA-5	Shallow	Historic data not presented; historic data indicates that PCBs have not been present at concentrations greater than laboratory reporting limits in historic groundwater samples collected from MCA-5.							
		4/1/2014	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
M&A-104	Shallow	10/02/2002	BDL (0.5)	BDL (1.0)	BDL (0.5)	**1.6**	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/23/2003	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/17/2006	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)
		10/19/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/30/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/17/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/16/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/23/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**0.592**	BDL (0.5)	BDL (0.5)
		12/17/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/07/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	**0.716**	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/12/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	**1.66**	BDL (0.658)	BDL (0.658)	BDL (0.658)
		10/19/2010	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)
		4/20/2011	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	**0.911**	BDL (0.556)	BDL (0.556)
		10/25/2011	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)
		4/25/2012	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)
		10/01/2012	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)
		4/18/2013	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)
		10/21/2013	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)
		4/01/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
M&A-110	Intermed	5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	[illegible]	BDL (0.5)	BDL (0.5)
		4/17/2006 [1]	NS	NS	NS	NS	NS	NS	NS
		5/15/2006	BDL (0.4)	BDL (0.4)	BDL (0.4)	[illegible]	BDL (0.4)	BDL (0.4)	BDL (0.4)
		10/19/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.31**	BDL (0.5)	BDL (0.5)
		4/30/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/17/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.11**	BDL (0.5)	BDL (0.5)
		10/23/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**0.848**	BDL (0.5)	BDL (0.5)
		4/07/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	**0.508**	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/12/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)	**2.31**	BDL (0.658)	BDL (0.658)
		10/19/2010	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	**0.842**	BDL (0.495)	BDL (0.495)
		4/20/2011	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	**1.98**	BDL (0.556)	BDL (0.556)
		10/25/2011	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	**2.10**	BDL (0.500)	BDL (0.500)
		4/25/2012	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)
		10/02/2012	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	**1.45**	BDL (0.500)	BDL (0.500)
		4/18/2013	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)
		10/21/2013	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)
		4/1/2014	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)

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GW Samples			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
IEPA TACO Tier I Standard			2.5	2.5	2.5	2.5	2.5	2.5	2.5
WELL	AQUIFER	DATE	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
M&A-111	Intermed	10/02/2002	BDL (25)	BDL (50)	BDL (25)	600	BDL (25)	150	BDL (25)
		10/23/2003	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	5.73	BDL (0.5)	BDL (0.5)
		5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/18/2006	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)
		10/19/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/30/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/18/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**0.652**	BDL (0.5)	BDL (0.5)
		4/16/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/22/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.16**	BDL (0.5)	NS
		12/17/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/07/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	**0.712**	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/12/2010	BDL (0.625)	BDL (0.625)	BDL (0.625)	**1.14**	BDL (0.625)	BDL (0.625)	BDL (0.625)
		10/19/2010	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)
		4/20/2011	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	**2.35**	BDL (0.556)	BDL (0.556)
		10/25/2011	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	**1.05**	BDL (0.495)	BDL (0.495)
		4/24/2012	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)
		10/02/2012	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	3.18	BDL (0.500)	BDL (0.500)
		4/18/2013	BDL (2.000)	BDL (2.000)	BDL (2.000)	BDL (2.000)	18.8	BDL (2.000)	BDL (2.000)
		10/21/2013	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)
		4/1/2014	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
M&A-112	Shallow	10/02/2002	BDL (0.5)	BDL (1.0)	BDL (0.5)	5.9	BDL (0.5)	2.8	BDL (0.5)
		10/23/2003	BDL (1.0)	BDL (2.0)	BDL (1.0)	BDL (1.0)	17.7	9.04	BDL (1.0)
		5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	13.3	BDL (0.5)	BDL (0.5)
		4/18/2006	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)
		10/19/2006[2]	NS	NS	NS	NS	NS	NS	NS
		5/01/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/18/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.99**	BDL (0.5)	BDL (0.5)
		4/16/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/23/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.02**	BDL (0.5)	BDL (0.5)
		4/07/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.39**	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.04**	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/13/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)	8.73	BDL (0.658)	BDL (0.658)
		10/19/2010	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	3.12	BDL (0.490)	BDL (0.490)
		4/20/2011	BDL (0.526)	BDL (0.526)	BDL (0.526)	BDL (0.526)	4.15	BDL (0.526)	BDL (0.526)
		10/25/2011	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	4.09	BDL (0.485)	BDL (0.485)
		4/25/2012	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	**0.885**	BDL (0.500)	BDL (0.500)
		10/01/2012	BDL (<5.0)	BDL (<5.0)	BDL (<5.0)	BDL (<5.0)	386	BDL (<5.0)	BDL (<5.0)
		11/05/2012	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (<0.495)	BDL (5.0)	BDL (5.0)
		4/18/2013	BDL (0.467)	BDL (0.467)	BDL (0.467)	BDL (0.467)	**2.39**	BDL (0.467)	BDL (0.467)
		10/21/2013	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	21.8	BDL (0.481)	BDL (0.481)
		4/2/2014	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	7.03	BDL (0.500)	BDL (0.500)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)

TABLE 1
HISTORIC AND CURRENT PCB RESULTS SUMMARY
2014 ANNUAL PCB REPORT
BODYCOTE THERMAL PROCESSING
MELROSE PARK, IL

GW Samples			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
IEPA TACO Tier I Standard			2.5	2.5	2.5	2.5	2.5	2.5	2.5
WELL	AQUIFER	DATE	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
M&A-113	Intermed	5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	16.8	BDL (0.5)	BDL (0.5)
		4/19/2006	BDL (1.0)	BDL (1.0)	BDL (1.0)	15.4	BDL (1.0)	BDL (1.0)	BDL (1.0)
		10/19/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.22**	BDL (0.5)	BDL (0.5)
		5/01/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/17/2007[2]	NS	NS	NS	NS	NS	NS	NS
		10/23/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	5.26	BDL (0.5)	BDL (0.5)
		12/17/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**1.29**	BDL (0.5)	BDL (0.5)
		4/07/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	2.96	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	1.12	BDL (0.5)	BDL (0.5)
		4/13/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)	5.39	BDL (0.658)	BDL (0.658)
		10/20/2010	BDL (2.48)	BDL (2.48)	BDL (2.48)	BDL (2.48)	17.6	BDL (2.48)	BDL (2.48)
		4/20/2011	BDL (0.526)	BDL (0.526)	BDL (0.526)	BDL (0.526)	10.2	BDL (0.526)	BDL (0.526)
		10/25/2011	BDL (6.25)	BDL (6.25)	BDL (6.25)	BDL (6.25)	90.6	BDL (6.25)	BDL (6.25)
		4/25/2012	BDL (0.526)	BDL (0.526)	BDL (0.526)	BDL (0.526)	7.37	BDL (0.526)	BDL (0.526)
		10/02/2012	BDL (0.526)	BDL (0.526)	BDL (0.526)	BDL (0.526)	15.1	BDL (0.526)	BDL (0.526)
		10/21/2013	BDL (4.81)	BDL (4.81)	BDL (4.81)	BDL (4.81)	70.2	BDL (4.81)	BDL (4.81)
		4/02/2014	BDL (25.0)	BDL (25.0)	BDL (25.0)	BDL (25.0)	166	BDL (25.0)	BDL (25.0)
		10/28/2014	BDL (1120)	BDL (1120)	BDL (1120)	BDL (1120)	4630	BDL (1120)	BDL (1120)
M&A-114	Shallow	10/02/2002	BDL (0.5)	BDL (1.0)	BDL (0.5)	16.8	BDL (0.5)	13.8	BDL (0.5)
		4/17/2006 [3]	NS	NS	NS	NS	NS	NS	NS
		10/19/2006 [3]	NS	NS	NS	NS	NS	NS	NS
		5/2/2007 [3]	NS	NS	NS	NS	NS	NS	NS
		10/17/2007[3]	NS	NS	NS	NS	NS	NS	NS
		10/22/2008[3]	NS	NS	NS	NS	NS	NS	NS
		10/20/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/07/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)
		10/19/2010	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)
		4/20/2011	BDL (0.485)	BRL(<0.485)	BDL (0.485)	BDL (0.485)	**2.13**	BDL (0.485)	BDL (0.485)
		10/24/2011	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)
		10/01/2012	BDL (4.76)	BDL (4.76)	BDL (4.76)	BDL (4.76)	10.5	BDL (4.76)	BDL (4.76)
		10/21/2013	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	3.77	BDL (0.446)	BDL (0.446)
		4/01/2014	NS	NS	NS	NS	NS	NS	NS
		10/28/2014	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)
M&A-116	Shallow	Historic data not presented; historic data indicates that PCBs have not been present at concentrations greater than laboratory reporting limits in historic groundwater samples collected from M&A-116.							
		4/01/2014	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
M&A-121	Intermed	Historic data not presented; historic data indicates that PCBs have not been present at concentrations greater than laboratory reporting limits in historic groundwater samples collected from M&A-121.							
		4/01/2014	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)
		10/28/2014	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)

TABLE 1
HISTORIC AND CURRENT PCB RESULTS SUMMARY
2014 ANNUAL PCB REPORT
BODYCOTE THERMAL PROCESSING
MELROSE PARK, IL

GW Samples			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
IEPA TACO Tier I Standard			2.5	2.5	2.5	2.5	2.5	2.5	2.5
WELL	AQUIFER	DATE	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
M&A-122	Intermed	Historic data not presented; historic data indicates that PCBs have not been present at concentrations greater than laboratory reporting limits in historic groundwater samples collected from M&A-122.							
		4/02/2014	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
M&A-124	Shallow	Historic data not presented; historic data indicates that PCBs have not been present at concentrations greater than laboratory reporting limits in historic groundwater samples collected from M&A-124.							
		4/1/2014	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
M&A-126	Intermed	Historic data not presented; historic data indicates that PCBs have not been present at concentrations greater than laboratory reporting limits in historic groundwater samples collected from M&A-126.							
		4/1/2014	BDL (0.446)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)
		10/28/2014	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)
M&A-301	Shallow	4/19/2006	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)
		10/18/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		5/02/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/17/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/16/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/22/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/09/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/20/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/12/2010	**1.08**	BDL (0.625)	BDL (0.625)	BDL (0.625)	BDL (0.625)	BDL (0.625)	BDL (0.625)
		10/20/2010	BDL (0.49)	BDL (0.49)	BDL (0.49)	BDL (0.49)	BDL (0.49)	BDL (0.49)	BDL (0.49)
		4/20/2011	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/25/2011	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/25/2012	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/01/2012	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)
		4/18/2013	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/22/2013	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)
		4/02/2014	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)
		10/29/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)

Notes: µg/L - micrograms per liter
PCB analysis performed via EPA Method 8082
TACO - Tiered Approach toward Corrective Action
TACO Tier I Standards based on the Illinois Environmental Protection Agency Title 35. Admin Code 742.505
Tier 1 Remediation Objectives for Class II Groundwater
Shading indicates compound exceeds established Illinois EPA TACO Tier I standard.
BOLD values indicate compound was detected above the laboratory method detection limit indicated.
NS - Not Sampled
(1) Not sampled, well was dry.
(2) Not sampled, insufficient water recharge to complete sampling.
(3) Not sampled, well contained no water, only Free Product
(4) Not sampled, obstruction in well.

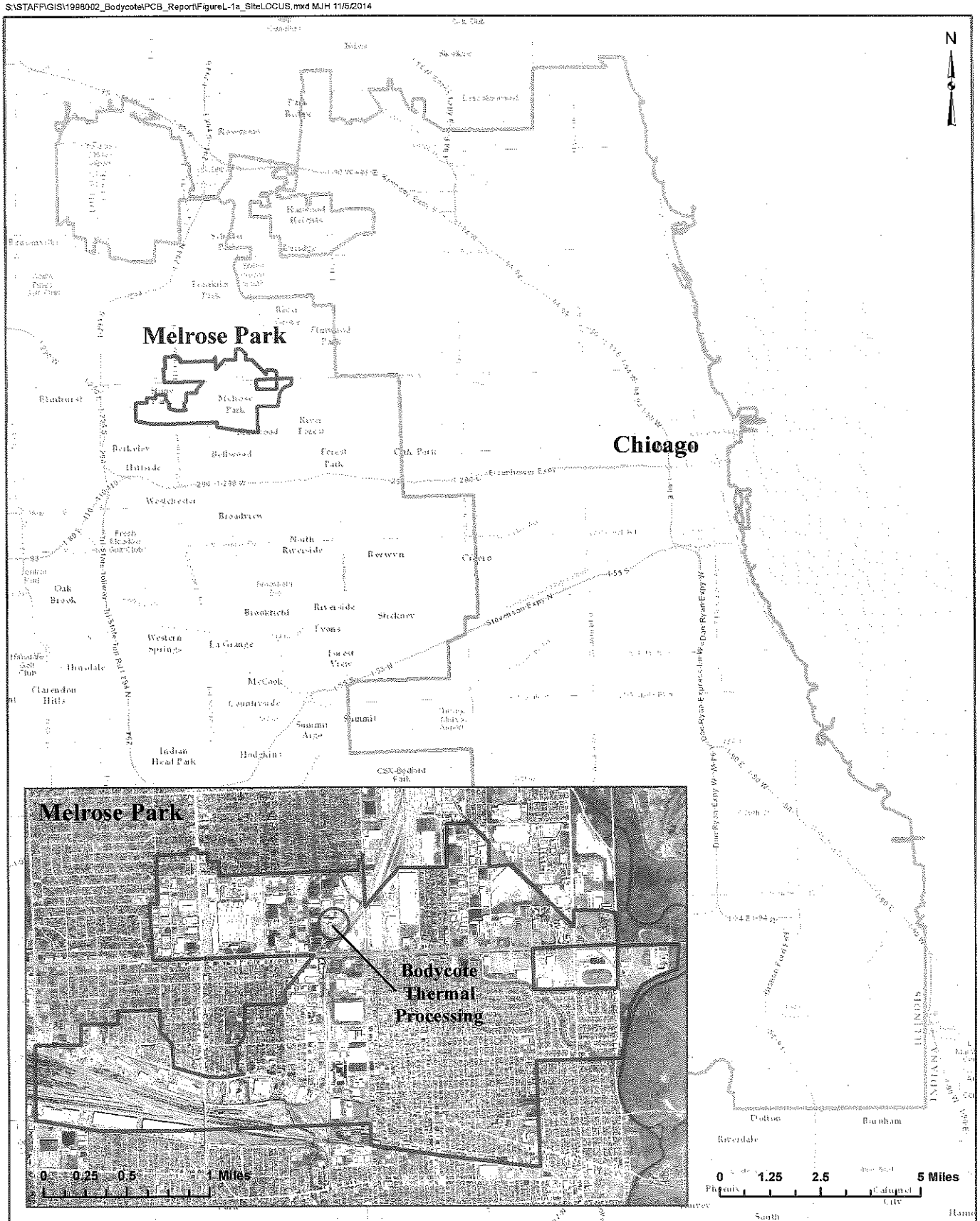
TABLE 2
BODYCOTE THERMAL PROCESSING
HEAT TREATMENT BUILDING
SUMMARY OF NON-AQUEOUS PHASE LIQUID POLYCHLORINATED BIPHENYL LABORATORY ANALYTICAL RESULTS

PCBs			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
WELL	AQUIFER	DATE	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
M&A-113	Intermed (DNAPL)	5/17/2004	BDL (50)	BDL (50)	BDL (50)	BDL (50)	**946**	BDL (50)	BDL (50)
		4/19/2006	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)
		10/19/2006 (1)	NS	NS	NS	NS	NS	NS	NS
		5/2/2007	BDL (3.2)	BDL (3.2)	BDL (3.2)	BDL (3.2)	**953**	BDL (3.2)	BDL (3.2)
		10/17/2007	BDL (6.53)	BDL (6.53)	BDL (6.53)	BDL (6.53)	**1,320**	BDL (6.53)	BDL (6.53)
		4/16/2008	BDL (3.33)	BDL (3.33)	BDL (3.33)	BDL (3.33)	**1,330**	BDL (3.33)	BDL (3.33)
		10/22/2008	BDL (3.26)	BDL (3.26)	BDL (3.26)	BDL (3.26)	**1,270**	BDL (3.26)	BDL (3.26)
		4/7/2009	BDL (1.33)	BDL (1.33)	BDL (1.33)	**38.4**	BDL (1.33)	BDL (1.33)	BDL (1.33)
		10/21/2009	BDL (1.66)	BDL (1.66)	BDL (1.66)	BDL (1.66)	**1,180**	BDL (1.66)	BDL (1.66)
M&A-114	Shallow (LNAPL)	5/17/2004	BDL (0.05)	BDL (0.05)	BDL (0.05)	BDL (0.05)	**1.72**	BDL (0.05)	BDL (0.05)
		4/17/2006	BDL (0.128)	BDL (0.128)	BDL (0.128)	BDL (0.128)	**41.4**	BDL (0.128)	BDL (0.128)
		10/19/2006	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)	BDL (0.0326)
		5/2/2007	BDL (0.162)	BDL (0.162)	BDL (0.162)	BDL (0.162)	**36.8**	BDL (0.162)	BDL (0.162)
		10/17/2007	BDL (0.135)	BDL (0.135)	BDL (0.135)	BDL (0.135)	**53.5**	BDL (0.135)	BDL (0.135)
		4/16/2008	BDL (0.133)	BDL (0.133)	BDL (0.133)	BDL (0.133)	**36**	BDL (0.133)	BDL (0.133)
		10/22/2008	BDL (0.132)	BDL (0.132)	BDL (0.132)	BDL (0.132)	**21.3**	BDL (0.132)	BDL (0.132)
		4/7/2009	BDL (0.131)	BDL (0.131)	BDL (0.131)	**28.8**	BDL (0.131)	BDL (0.131)	BDL (0.131)
		10/21/2009 (1)	NS	NS	NS	NS	NS	NS	NS
M&A-301	Shallow (LNAPL)	5/17/2004	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	**0.67**	BDL (0.5)	BDL (0.5)
		4/19/2006 to 10/22/2010 (1)	**NAPL absent. No Further Remediation Status Granted by IEPA and filed at Cook County Recorder of Deeds 07/08/2010.**						
MCA-2	Shallow (LNAPL)	5/17/2004	NS	NS	NS	NS	NS	NS	NS
		4/17/2006	BDL (0.132)	BDL (0.132)	BDL (0.132)	BDL (0.132)	BDL (0.132)	BDL (0.132)	BDL (0.132)
		10/19/2006	BDL (0.032)	BDL (0.032)	BDL (0.032)	BDL (0.032)	BDL (0.032)	BDL (0.032)	BDL (0.032)
		5/2/2007 to 10/22/2009 (1)	**NAPL Absent. No Further Remediation Status Granted by IEPA and filed at Cook County Recorder of Deeds 09/23/2009.**						

Notes: mg/kg - milligrams per kilogram.
PCB analysis performed via EPA Method 8082
NS - Not sampled
BOLD values indicate compound was detected above laboratory method detection limit indicated.
(1) Not sampled, no product present

FIGURES

S:\STAFF\GIS\1998002_Bodycote\PCB_Report\FigureL-1a_SiteLOCUS.mxd MJH 11/5/2014



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Bodycote Thermal Processing, Inc.
PCB Annual Report

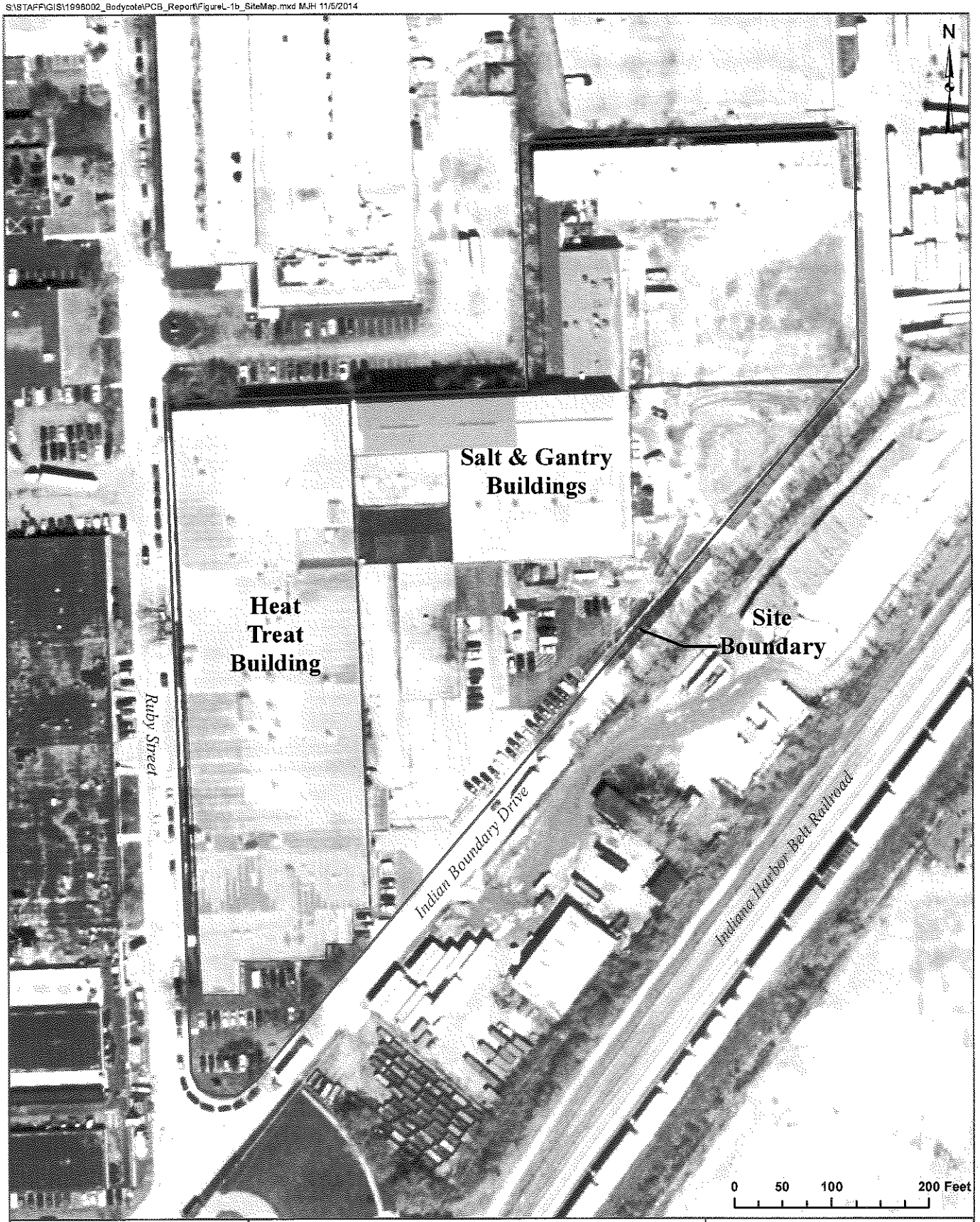
SITE LOCUS

1975 North Ruby Street
Melrose Park, IL

Figure No. L-1a

Scale: See Scale Bar	
Drawn: MJH	Approved: CLM
Projection: NAD83 Illinois State Plane East (feet)	
Proj. No. 1998002.331.006	Date: 11/5/2014

S:\STAFF\GIS\1998002_Bodycote\PCB_Report\FigureL-1b_SiteMap.mxd MJH 11/5/2014



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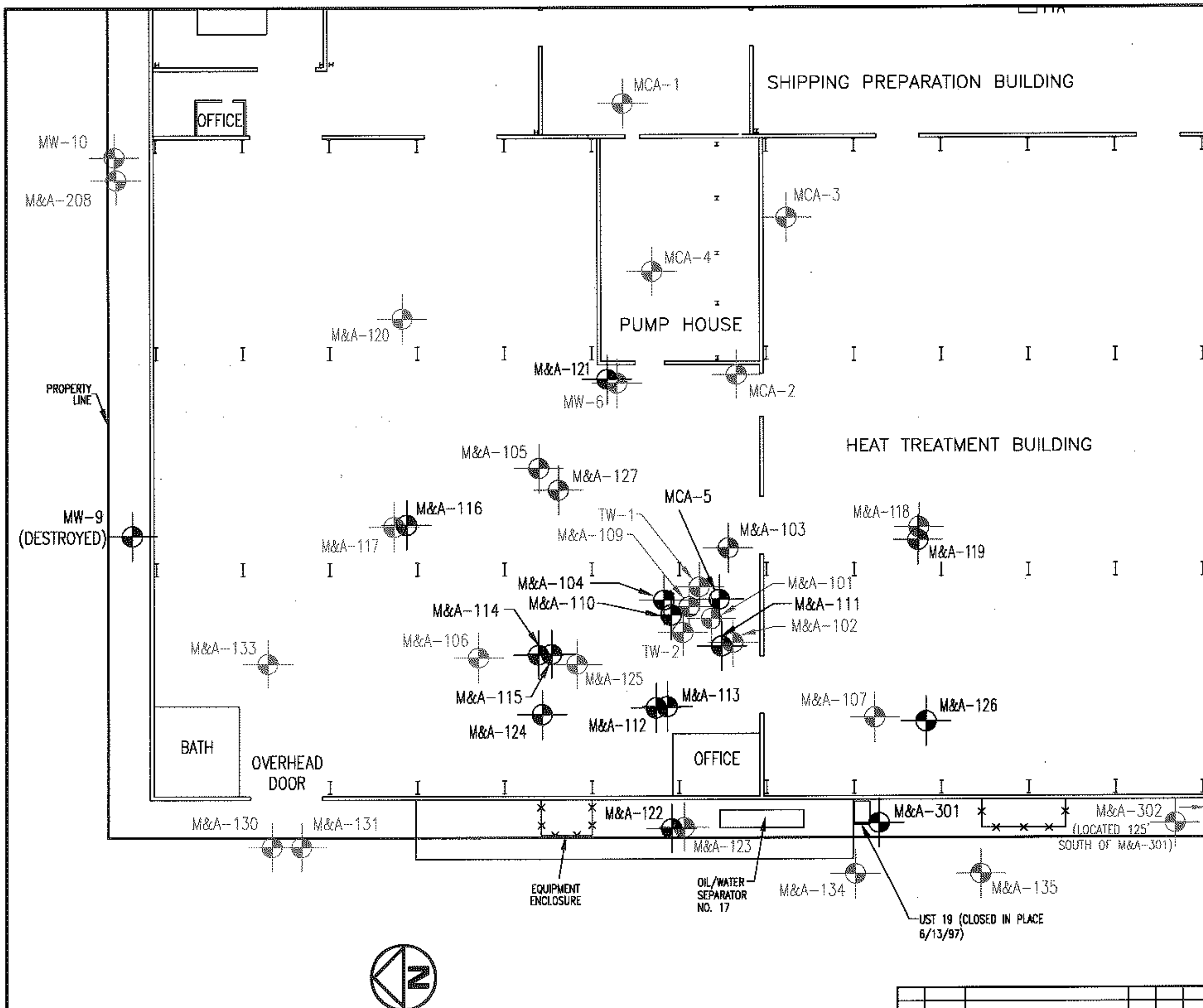
Bodycote Thermal Processing
PCB Annual Report Report

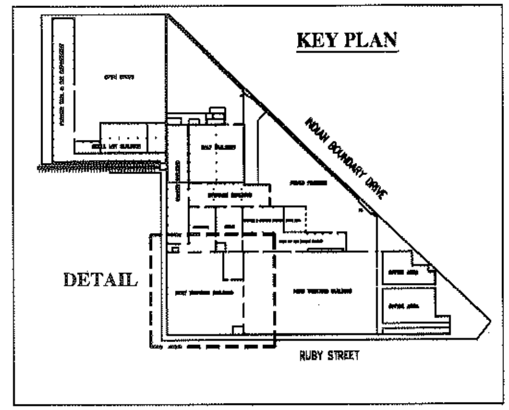
SITE MAP

1975 North Ruby Street
Melrose Park, IL

Figure No. L-1b

Scale: See Scale Bar	
Drawn: MJH	Approved: CLM
Projection: NAD83 Illinois State Plane East (feet)	
Proj. No. 1998002.331.006	Date: 11/5/2014





NOTES:

1. MONITORING WELL AND BORING LOCATIONS INSTALLED PRIOR TO 1997 ARE BASED ON FIELD MEASUREMENTS TAKEN BY M&A PERSONNEL.
2. MONITORING WELL AND BORING LOCATIONS INSTALLED DURING AND AFTER 1997 ARE BASED ON FIELD MEASUREMENTS TAKEN BY AN ILLINOIS REGISTERED LAND SURVEYOR.

LEGEND:

- MONITORING WELL LOCATION
- CLOSED IN PLACE (DECEMBER 2008)
- CLOSED IN PLACE (MARCH-APRIL 2011)
- APPROXIMATE PROPERTY LINE
- CHAIN LINK FENCE
- SUPPORTING COLUMN

SCALE:

0' 30' 60' 90'

BODYCOTE THERMAL PROCESSING, INC.

MELROSE PARK, ILLINOIS

NO.	DATE	DESCRIPTION	DRN	CHK	APP
1	12/4/14	FOR REGULATORY USE ONLY	DJA	MJH	CLM
		REVISION			

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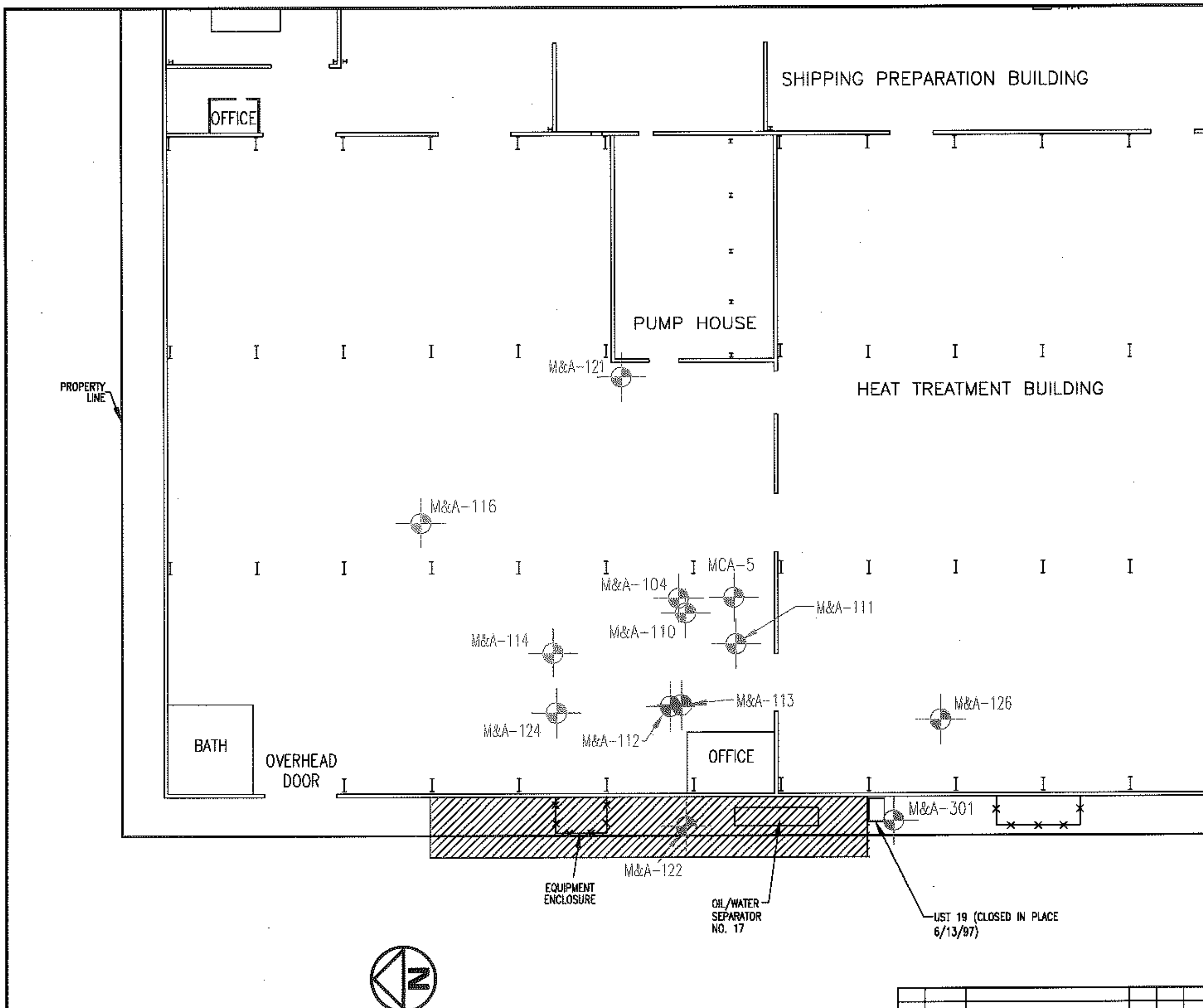
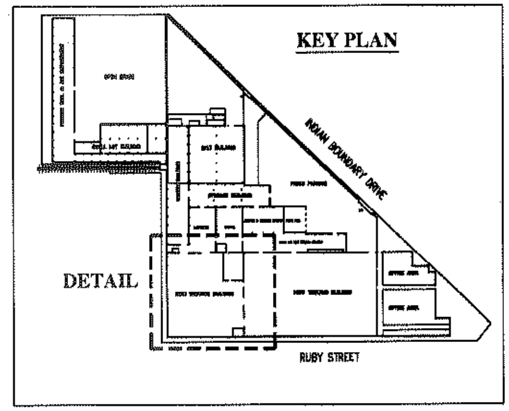
PCB ANNUAL REPORT MONITORING WELL LOCATIONS PLAN

DWG. NO. L-2

DRAWN DJA | APPROVED CLM | SCALE 1"=30'-0" | PROJ. NO. 1998002.331.008

S:\CADD\WORK\Bodycote\1998002-331.008\1998002-331.008 L-2.dwg - L-1 Plan - Dec. 01, 2014 4:55pm - dja





NOTES:

1. MONITORING WELL AND BORING LOCATIONS INSTALLED PRIOR TO 1997 ARE BASED ON FIELD MEASUREMENTS TAKEN BY M&A PERSONNEL.
2. MONITORING WELL AND BORING LOCATIONS INSTALLED DURING AND AFTER 1997 ARE BASED ON FIELD MEASUREMENTS TAKEN BY AN ILLINOIS REGISTERED LAND SURVEYOR.

LEGEND:

- MONITORING WELL LOCATION
- PCBs NOT DETECTED IN GROUNDWATER AT CONCENTRATIONS ABOVE THE LABORATORY METHOD REPORTING LIMIT OF 0.5 ug/L
- PCBs DETECTED IN GROUNDWATER AT CONCENTRATIONS ABOVE 0.5 ug/L BUT BELOW THE IEPA GRO OF 2.5 ug/L
- PCBs DETECTED IN GROUNDWATER ABOVE THE IEPA GRO OF 2.5 ug/L
- APPROXIMATE PROPERTY LINE
- CHAIN LINK FENCE
- SUPPORTING COLUMN
- ENGINEERED BARRIER: CONCRETE SLAB

SCALE: 0' 30' 60' 90'

BODYCOTE THERMAL PROCESSING, INC.

MELROSE PARK, ILLINOIS

NO.	DATE	DESCRIPTION	DRN	CHK	APP
1	12/4/14	FOR REGULATORY USE ONLY	DJA	MJH	CLM

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PCB ANNUAL REPORT
PCB DETECTION LOCATIONS
APRIL/OCTOBER 2014

DWG. NO. L-3

DRAWN DJA | APPROVED CLM | SCALE 1"=30'-0" | PROJ. NO. 1998002.331.008

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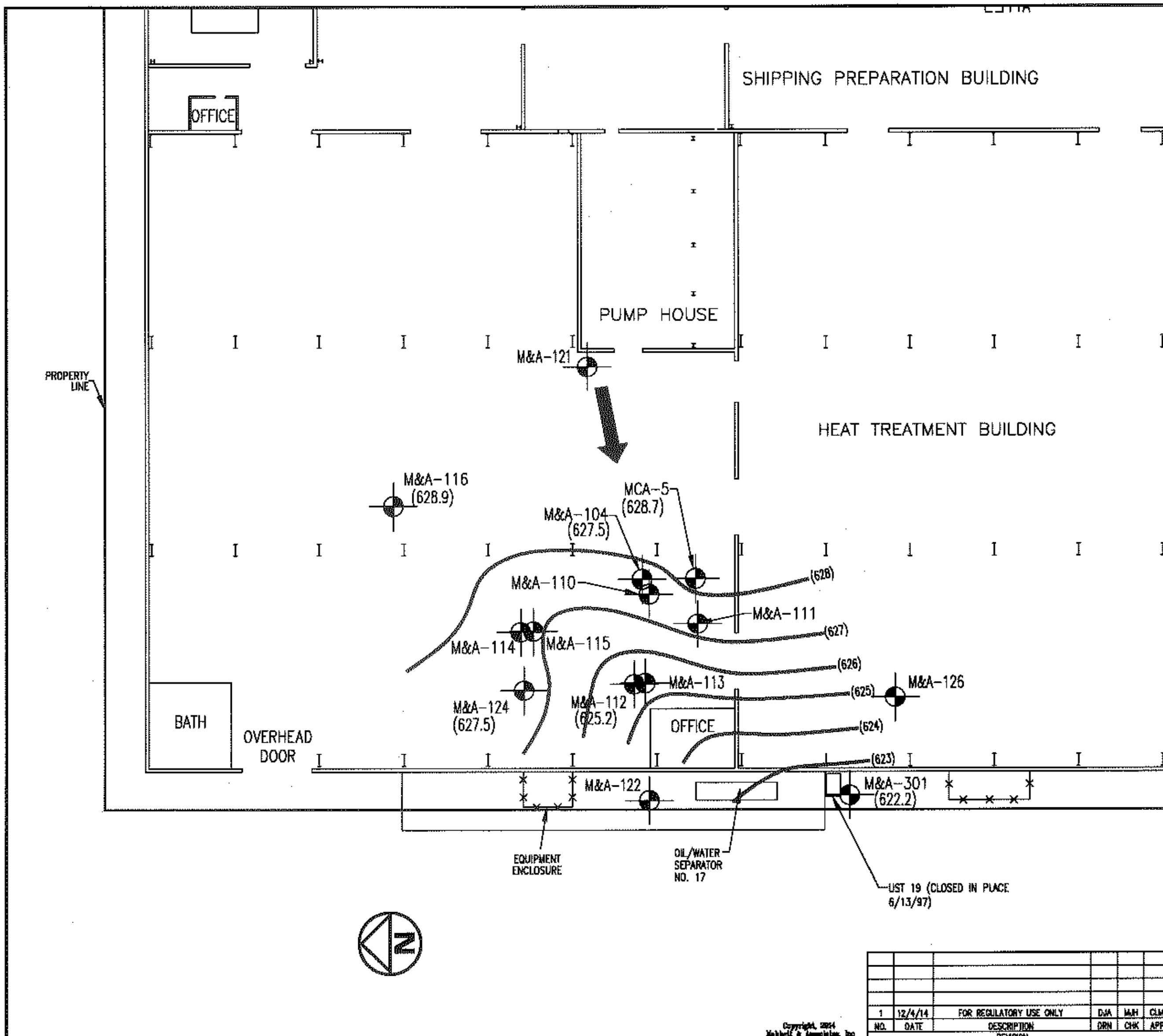
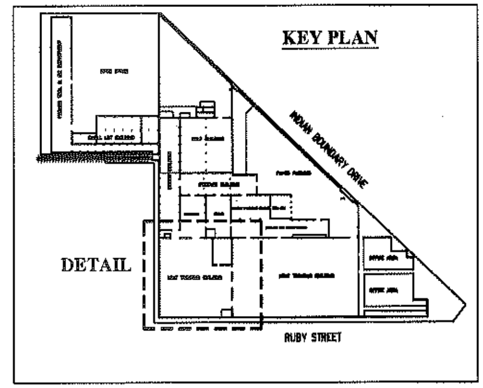


KEY PLAN



NOTES:

1. MONITORING WELL AND BORING LOCATIONS INSTALLED PRIOR TO 1997 ARE BASED ON FIELD MEASUREMENTS TAKEN BY M&A PERSONNEL.
2. MONITORING WELL AND BORING LOCATIONS INSTALLED DURING AND AFTER 1997 ARE BASED ON FIELD MEASUREMENTS TAKEN BY AN ILLINOIS REGISTERED LAND SURVEYOR.
3. MONITORING WELLS PRESENTED WITHOUT A GROUNDWATER ELEVATION WERE NOT USED TO INTERPOLATE GROUNDWATER CONTOURS DUE TO DEPTH OF SCREEN OR OUTLIER DATA.

LEGEND:

- MONITORING WELL LOCATION
- (630.5') GROUNDWATER ELEVATION, IN RESPECT TO THE NATIONAL GEODETIC VERTICAL DATUM (NGVD)
- APPROXIMATE PROPERTY LINE
- SUPPORTING COLUMN
- 1.0 FT. SHALLOW GROUNDWATER CONTOURS (OCTOBER 2014)
- CHAIN LINK FENCE
- GROUNDWATER FLOW DIRECTION (OCTOBER 2014)

SCALE:

0' 30' 60' 90'

BODYCOTE THERMAL PROCESSING, INC.

MELROSE PARK, ILLINOIS

NO.	DATE	DESCRIPTION	DRN	CHK	APP
1	12/4/14	FOR REGULATORY USE ONLY	DJA	MJH	CLM

REVISION

Mabbett

PCB ANNUAL REPORT SHALLOW GROUNDWATER ELEVATIONS CONTOUR PLAN (OCTOBER 2014)

DWG. NO. L-4

DRAWN DJA | APPROVED CLM | SCALE 1"=30'-0" | PROJ. NO. 1998002.331.006

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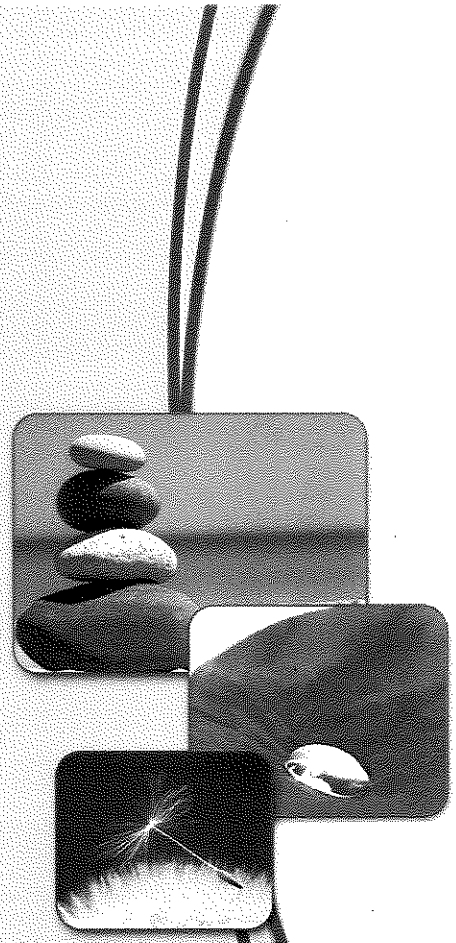
APPENDIX A

Laboratory Analytical Results
April and October 2014



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-50022-1
TestAmerica Sample Delivery Group: 1998002.329, Task 006
Client Project/Site: Bodycote Thermal Processing

For:
Mabbett & Associates, Inc.
5 Alfred Circle
Bedford, Massachusetts 01730

Attn: Christopher Mabbett

Authorized for release by:
4/18/2014 4:57:25 PM

Ken Hayes, Project Manager II
(615)301-5035
ken.hayes@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Sample Summary

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329; Task 006

3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-50022-1	MCA-5-040114	Water	04/01/14 14:10	04/04/14 07:15
490-50022-2	M&A-104-040114	Water	04/01/14 11:50	04/04/14 07:15
490-50022-3	M&A-110-040114	Water	04/01/14 13:10	04/04/14 07:15
490-50022-4	M&A-111-040114	Water	04/01/14 15:00	04/04/14 07:15
490-50022-5	M&A-112-040214	Water	04/02/14 09:15	04/04/14 07:15
490-50022-6	M&A-113-040214	Water	04/02/14 09:40	04/04/14 07:15
490-50022-7	M&A-116-040114	Water	04/01/14 09:25	04/04/14 07:15
490-50022-8	M&A-121-040114	Water	04/01/14 09:50	04/04/14 07:15
490-50022-9	M&A-122-040214	Water	04/02/14 08:00	04/04/14 07:15
490-50022-10	M&A-124-040114	Water	04/01/14 17:50	04/04/14 07:15
490-50022-11	M&A-126-040114	Water	04/01/14 16:45	04/04/14 07:15
490-50022-12	M&A-301-040214	Water	04/02/14 07:30	04/04/14 07:15
490-50022-13	FD-HTB-040114	Water	04/01/14 17:20	04/04/14 07:15

Case Narrative

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Job ID: 490-50022-1

Laboratory: TestAmerica Nashville

4

Narrative

Job Narrative
490-50022-1

Comments
No additional comments.

Receipt
The samples were received on 4/4/2014 7:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.0° C.

Except:

The following sample(s) had 2 containers listed on the Chain of Custody (COC); however, only one sample(s) was received: M&A-122-040214 (490-50022-9).

GC Semi VOA
Method(s) 8082, 8082A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 152960.

Method(s) 8082A: The surrogate recovery for TCMX for the associated sample was high outside acceptance criteria. Secondary surrogate recovery within limits therefore no re-extraction necessary.M&A-112-040214 (490-50022-5)

No other analytical or quality issues were noted.

Organic Prep
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 152960

Method(s) 3510C: Possible double surrogate

No other analytical or quality issues were noted.

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

5

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Client Sample ID: MCA-5-040114
Date Collected: 04/01/14 14:10
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.417		ug/L		04/10/14 18:18	04/11/14 16:19	1
PCB-1221	ND		0.417		ug/L		04/10/14 18:18	04/11/14 16:19	1
PCB-1232	ND		0.417		ug/L		04/10/14 18:18	04/11/14 16:19	1
PCB-1242	ND		0.417		ug/L		04/10/14 18:18	04/11/14 16:19	1
PCB-1248	ND		0.417		ug/L		04/10/14 18:18	04/11/14 16:19	1
PCB-1254	ND		0.417		ug/L		04/10/14 18:18	04/11/14 16:19	1
PCB-1260	ND		0.417		ug/L		04/10/14 18:18	04/11/14 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*75*		*10 - 150*	*04/10/14 18:18*	*04/11/14 16:19*	*1*
Tetrachloro-m-xylene	*96*		*10 - 150*	*04/10/14 18:18*	*04/11/14 16:19*	*1*

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Client Sample ID: M&A-104-040114
Date Collected: 04/01/14 11:50
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-2
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		04/10/14 18:18	04/11/14 16:32	1
PCB-1221	ND		0.431		ug/L		04/10/14 18:18	04/11/14 16:32	1
PCB-1232	ND		0.431		ug/L		04/10/14 18:18	04/11/14 16:32	1
PCB-1242	ND		0.431		ug/L		04/10/14 18:18	04/11/14 16:32	1
PCB-1248	ND		0.431		ug/L		04/10/14 18:18	04/11/14 16:32	1
PCB-1254	ND		0.431		ug/L		04/10/14 18:18	04/11/14 16:32	1
PCB-1260	ND		0.431		ug/L		04/10/14 18:18	04/11/14 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*92*		*10 - 150*	*04/10/14 18:18*	*04/11/14 16:32*	*1*
Tetrachloro-m-xylene	*96*		*10 - 150*	*04/10/14 18:18*	*04/11/14 16:32*	*1*

Client Sample ID: M&A-110-040114
Date Collected: 04/01/14 13:10
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-3
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.446		ug/L		04/10/14 18:18	04/11/14 16:45	1
PCB-1221	ND		0.446		ug/L		04/10/14 18:18	04/11/14 16:45	1
PCB-1232	ND		0.446		ug/L		04/10/14 18:18	04/11/14 16:45	1
PCB-1242	ND		0.446		ug/L		04/10/14 18:18	04/11/14 16:45	1
PCB-1248	ND		0.446		ug/L		04/10/14 18:18	04/11/14 16:45	1
PCB-1254	ND		0.446		ug/L		04/10/14 18:18	04/11/14 16:45	1
PCB-1260	ND		0.446		ug/L		04/10/14 18:18	04/11/14 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*81*		*10 - 150*	*04/10/14 18:18*	*04/11/14 16:45*	*1*
Tetrachloro-m-xylene	*97*		*10 - 150*	*04/10/14 18:18*	*04/11/14 16:45*	*1*

Client Sample ID: M&A-111-040114
Date Collected: 04/01/14 15:00
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-4
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/10/14 18:18	04/11/14 16:58	1
PCB-1221	ND		0.500		ug/L		04/10/14 18:18	04/11/14 16:58	1
PCB-1232	ND		0.500		ug/L		04/10/14 18:18	04/11/14 16:58	1
PCB-1242	ND		0.500		ug/L		04/10/14 18:18	04/11/14 16:58	1
PCB-1248	ND		0.500		ug/L		04/10/14 18:18	04/11/14 16:58	1
PCB-1254	ND		0.500		ug/L		04/10/14 18:18	04/11/14 16:58	1
PCB-1260	ND		0.500		ug/L		04/10/14 18:18	04/11/14 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*85*		*10 - 150*	*04/10/14 18:18*	*04/11/14 16:58*	*1*
Tetrachloro-m-xylene	*100*		*10 - 150*	*04/10/14 18:18*	*04/11/14 16:58*	*1*

Client Sample ID: M&A-112-040214
Date Collected: 04/02/14 09:15
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-5
Matrix: Water

6

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/10/14 18:18	04/11/14 17:11	1
PCB-1221	ND		0.500		ug/L		04/10/14 18:18	04/11/14 17:11	1
PCB-1232	ND		0.500		ug/L		04/10/14 18:18	04/11/14 17:11	1
PCB-1242	ND		0.500		ug/L		04/10/14 18:18	04/11/14 17:11	1
PCB-1248	7.03		0.500		ug/L		04/10/14 18:18	04/11/14 17:11	1
PCB-1254	ND		0.500		ug/L		04/10/14 18:18	04/11/14 17:11	1
PCB-1260	ND		0.500		ug/L		04/10/14 18:18	04/11/14 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*124*		*10 - 150*	*04/10/14 18:18*	*04/11/14 17:11*	*1*
DCB Decachlorobiphenyl (Surr)	*153*	*X*	*10 - 150*	*04/10/14 18:18*	*04/14/14 16:45*	*10*
Tetrachloro-m-xylene	*167*	*X*	*10 - 150*	*04/10/14 18:18*	*04/11/14 17:11*	*1*
Tetrachloro-m-xylene	*182*	*X*	*10 - 150*	*04/10/14 18:18*	*04/14/14 16:45*	*10*

Client Sample ID: M&A-113-040214
Date Collected: 04/02/14 09:40
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-6
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		25.0		ug/L		04/10/14 18:18	04/14/14 16:58	50
PCB-1221	ND		25.0		ug/L		04/10/14 18:18	04/14/14 16:58	50
PCB-1232	ND		25.0		ug/L		04/10/14 18:18	04/14/14 16:58	50
PCB-1242	ND		25.0		ug/L		04/10/14 18:18	04/14/14 16:58	50
PCB-1248	166		25.0		ug/L		04/10/14 18:18	04/14/14 16:58	50
PCB-1254	ND		25.0		ug/L		04/10/14 18:18	04/14/14 16:58	50
PCB-1260	ND		25.0		ug/L		04/10/14 18:18	04/14/14 16:58	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*76*		*10 - 150*	*04/10/14 18:18*	*04/14/14 16:58*	*50*
Tetrachloro-m-xylene	*71*		*10 - 150*	*04/10/14 18:18*	*04/14/14 16:58*	*50*

Client Sample ID: M&A-116-040114
Date Collected: 04/01/14 09:25
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-7
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:36	1
PCB-1221	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:36	1
PCB-1232	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:36	1
PCB-1242	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:36	1
PCB-1248	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:36	1
PCB-1254	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:36	1
PCB-1260	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*62*		*10 - 150*	*04/10/14 18:18*	*04/11/14 17:36*	*1*
Tetrachloro-m-xylene	*76*		*10 - 150*	*04/10/14 18:18*	*04/11/14 17:36*	*1*

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Client Sample ID: M&A-121-040114
Date Collected: 04/01/14 09:50
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-8
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:49	1
PCB-1221	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:49	1
PCB-1232	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:49	1
PCB-1242	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:49	1
PCB-1248	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:49	1
PCB-1254	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:49	1
PCB-1260	ND		0.481		ug/L		04/10/14 18:18	04/11/14 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*75*		*10 - 150*	*04/10/14 18:18*	*04/11/14 17:49*	*1*
Tetrachloro-m-xylene	*89*		*10 - 150*	*04/10/14 18:18*	*04/11/14 17:49*	*1*

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Client Sample ID: M&A-122-040214
Date Collected: 04/02/14 08:00
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-9
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/10/14 18:18	04/11/14 18:02	1
PCB-1221	ND		0.500		ug/L		04/10/14 18:18	04/11/14 18:02	1
PCB-1232	ND		0.500		ug/L		04/10/14 18:18	04/11/14 18:02	1
PCB-1242	ND		0.500		ug/L		04/10/14 18:18	04/11/14 18:02	1
PCB-1248	ND		0.500		ug/L		04/10/14 18:18	04/11/14 18:02	1
PCB-1254	ND		0.500		ug/L		04/10/14 18:18	04/11/14 18:02	1
PCB-1260	ND		0.500		ug/L		04/10/14 18:18	04/11/14 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*82*		*10 - 150*	*04/10/14 18:18*	*04/11/14 18:02*	*1*
Tetrachloro-m-xylene	*96*		*10 - 150*	*04/10/14 18:18*	*04/11/14 18:02*	*1*

Client Sample ID: M&A-124-040114
Date Collected: 04/01/14 17:50
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-10
Matrix: Water

6

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:40	1
PCB-1221	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:40	1
PCB-1232	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:40	1
PCB-1242	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:40	1
PCB-1248	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:40	1
PCB-1254	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:40	1
PCB-1260	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*88*		*10 - 150*	*04/10/14 18:18*	*04/11/14 18:40*	*1*
Tetrachloro-m-xylene	*100*		*10 - 150*	*04/10/14 18:18*	*04/11/14 18:40*	*1*

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Client Sample ID: M&A-126-040114
Date Collected: 04/01/14 16:45
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-11
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:53	1
PCB-1221	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:53	1
PCB-1232	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:53	1
PCB-1242	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:53	1
PCB-1248	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:53	1
PCB-1254	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:53	1
PCB-1260	ND		0.481		ug/L		04/10/14 18:18	04/11/14 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*85*		*10 - 150*	*04/10/14 18:18*	*04/11/14 18:53*	*1*
Tetrachloro-m-xylene	*94*		*10 - 150*	*04/10/14 18:18*	*04/11/14 18:53*	*1*

Client Sample ID: M&A-301-040214
Date Collected: 04/02/14 07:30
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-12
Matrix: Water

6

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/10/14 18:18	04/11/14 19:06	1
PCB-1221	ND		0.500		ug/L		04/10/14 18:18	04/11/14 19:06	1
PCB-1232	ND		0.500		ug/L		04/10/14 18:18	04/11/14 19:06	1
PCB-1242	ND		0.500		ug/L		04/10/14 18:18	04/11/14 19:06	1
PCB-1248	ND		0.500		ug/L		04/10/14 18:18	04/11/14 19:06	1
PCB-1254	ND		0.500		ug/L		04/10/14 18:18	04/11/14 19:06	1
PCB-1260	ND		0.500		ug/L		04/10/14 18:18	04/11/14 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*77*		*10 - 150*	*04/10/14 18:18*	*04/11/14 19:06*	*1*
Tetrachloro-m-xylene	*96*		*10 - 150*	*04/10/14 18:18*	*04/11/14 19:06*	*1*

Client Sample ID: FD-HTB-040114
Date Collected: 04/01/14 17:20
Date Received: 04/04/14 07:15

Lab Sample ID: 490-50022-13
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.417		ug/L		04/10/14 18:18	04/11/14 19:19	1
PCB-1221	ND		0.417		ug/L		04/10/14 18:18	04/11/14 19:19	1
PCB-1232	ND		0.417		ug/L		04/10/14 18:18	04/11/14 19:19	1
PCB-1242	ND		0.417		ug/L		04/10/14 18:18	04/11/14 19:19	1
PCB-1248	ND		0.417		ug/L		04/10/14 18:18	04/11/14 19:19	1
PCB-1254	ND		0.417		ug/L		04/10/14 18:18	04/11/14 19:19	1
PCB-1260	ND		0.417		ug/L		04/10/14 18:18	04/11/14 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*82*		*10 - 150*	*04/10/14 18:18*	*04/11/14 19:19*	*1*
Tetrachloro-m-xylene	*91*		*10 - 150*	*04/10/14 18:18*	*04/11/14 19:19*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 490-152960/1-A
Matrix: Water
Analysis Batch: 154655

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/10/14 18:18	04/11/14 15:41	1
PCB-1221	ND		0.500		ug/L		04/10/14 18:18	04/11/14 15:41	1
PCB-1232	ND		0.500		ug/L		04/10/14 18:18	04/11/14 15:41	1
PCB-1242	ND		0.500		ug/L		04/10/14 18:18	04/11/14 15:41	1
PCB-1248	ND		0.500		ug/L		04/10/14 18:18	04/11/14 15:41	1
PCB-1254	ND		0.500		ug/L		04/10/14 18:18	04/11/14 15:41	1
PCB-1260	ND		0.500		ug/L		04/10/14 18:18	04/11/14 15:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*89*		*10 - 150*	*04/10/14 18:18*	*04/11/14 15:41*	*1*
Tetrachloro-m-xylene	*81*		*10 - 150*	*04/10/14 18:18*	*04/11/14 15:41*	*1*

Lab Sample ID: LCS 490-152960/2-A
Matrix: Water
Analysis Batch: 154655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	8.00	7.802		ug/L		98	23 - 139
PCB-1260	8.00	9.054		ug/L		113	36 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*92*		*10 - 150*
Tetrachloro-m-xylene	*85*		*10 - 150*

GC Semi VOA

Prep Batch: 152960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-50022-1	MCA-5-040114	Total/NA	Water	3510C	
490-50022-2	M&A-104-040114	Total/NA	Water	3510C	
490-50022-3	M&A-110-040114	Total/NA	Water	3510C	
490-50022-4	M&A-111-040114	Total/NA	Water	3510C	
490-50022-5	M&A-112-040214	Total/NA	Water	3510C	
490-50022-6	M&A-113-040214	Total/NA	Water	3510C	
490-50022-7	M&A-116-040114	Total/NA	Water	3510C	
490-50022-8	M&A-121-040114	Total/NA	Water	3510C	
490-50022-9	M&A-122-040214	Total/NA	Water	3510C	
490-50022-10	M&A-124-040114	Total/NA	Water	3510C	
490-50022-11	M&A-126-040114	Total/NA	Water	3510C	
490-50022-12	M&A-301-040214	Total/NA	Water	3510C	
490-50022-13	FD-HTB-040114	Total/NA	Water	3510C	
LCS 490-152960/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 490-152960/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 154655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-50022-1	MCA-5-040114	Total/NA	Water	8082A	152960
490-50022-2	M&A-104-040114	Total/NA	Water	8082A	152960
490-50022-3	M&A-110-040114	Total/NA	Water	8082A	152960
490-50022-4	M&A-111-040114	Total/NA	Water	8082A	152960
490-50022-5	M&A-112-040214	Total/NA	Water	8082A	152960
490-50022-7	M&A-116-040114	Total/NA	Water	8082A	152960
490-50022-8	M&A-121-040114	Total/NA	Water	8082A	152960
490-50022-9	M&A-122-040214	Total/NA	Water	8082A	152960
490-50022-10	M&A-124-040114	Total/NA	Water	8082A	152960
490-50022-11	M&A-126-040114	Total/NA	Water	8082A	152960
490-50022-12	M&A-301-040214	Total/NA	Water	8082A	152960
490-50022-13	FD-HTB-040114	Total/NA	Water	8082A	152960
LCS 490-152960/2-A	Lab Control Sample	Total/NA	Water	8082A	152960
MB 490-152960/1-A	Method Blank	Total/NA	Water	8082A	152960

Analysis Batch: 155222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-50022-5	M&A-112-040214	Total/NA	Water	8082A	152960
490-50022-6	M&A-113-040214	Total/NA	Water	8082A	152960

Lab Chronicle

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Client Sample ID: MCA-5-040114

Lab Sample ID: 490-50022-1
Matrix: Water

Date Collected: 04/01/14 14:10
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			150 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	150 mL	5 mL	154655	04/11/14 16:19	MGH	TAL NSH

Client Sample ID: M&A-104-040114

Lab Sample ID: 490-50022-2
Matrix: Water

Date Collected: 04/01/14 11:50
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	154655	04/11/14 16:32	MGH	TAL NSH

Client Sample ID: M&A-110-040114

Lab Sample ID: 490-50022-3
Matrix: Water

Date Collected: 04/01/14 13:10
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			140 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	140 mL	5 mL	154655	04/11/14 16:45	MGH	TAL NSH

Client Sample ID: M&A-111-040114

Lab Sample ID: 490-50022-4
Matrix: Water

Date Collected: 04/01/14 15:00
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			125 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	125 mL	5 mL	154655	04/11/14 16:58	MGH	TAL NSH

Client Sample ID: M&A-112-040214

Lab Sample ID: 490-50022-5
Matrix: Water

Date Collected: 04/02/14 09:15
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			125 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	125 mL	5 mL	154655	04/11/14 17:11	MGH	TAL NSH
Total/NA	Prep	3510C			125 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		10	125 mL	5 mL	155222	04/14/14 16:45	SCS	TAL NSH

Client Sample ID: M&A-113-040214

Lab Sample ID: 490-50022-6
Matrix: Water
Date Collected: 04/02/14 09:40
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			125 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		50	125 mL	5 mL	155222	04/14/14 16:58	SCS	TAL NSH

Client Sample ID: M&A-116-040114

Lab Sample ID: 490-50022-7
Matrix: Water
Date Collected: 04/01/14 09:25
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			130 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	130 mL	5 mL	154655	04/11/14 17:36	MGH	TAL NSH

Client Sample ID: M&A-121-040114

Lab Sample ID: 490-50022-8
Matrix: Water
Date Collected: 04/01/14 09:50
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			130 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	130 mL	5 mL	154655	04/11/14 17:49	MGH	TAL NSH

Client Sample ID: M&A-122-040214

Lab Sample ID: 490-50022-9
Matrix: Water
Date Collected: 04/02/14 08:00
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			125 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	125 mL	5 mL	154655	04/11/14 18:02	MGH	TAL NSH

Client Sample ID: M&A-124-040114

Lab Sample ID: 490-50022-10
Matrix: Water
Date Collected: 04/01/14 17:50
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			130 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	130 mL	5 mL	154655	04/11/14 18:40	MGH	TAL NSH

Client Sample ID: M&A-126-040114

Lab Sample ID: 490-50022-11
Matrix: Water
Date Collected: 04/01/14 16:45
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			130 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	130 mL	5 mL	154655	04/11/14 18:53	MGH	TAL NSH

Lab Chronicle

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Client Sample ID: M&A-301-040214 — **Lab Sample ID: 490-50022-12**
Date Collected: 04/02/14 07:30 — Matrix: Water
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			125 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	125 mL	5 mL	154655	04/11/14 19:06	MGH	TAL NSH

Client Sample ID: FD-HTB-040114 — **Lab Sample ID: 490-50022-13**
Date Collected: 04/01/14 17:20 — Matrix: Water
Date Received: 04/04/14 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			150 mL	5 mL	152960	04/10/14 18:18	FXM	TAL NSH
Total/NA	Analysis	8082A		1	150 mL	5 mL	154655	04/11/14 19:19	MGH	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

10

Certification Summary

Client: Mabbett & Associates, Inc.
Project/Site: Bodycote Thermal Processing

TestAmerica Job ID: 490-50022-1
SDG: 1998002.329, Task 006

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	200010	12-09-14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Indianapolis

490-50022 Chain of Custody

Cooler Received/Opened On 4/3/2014 @ 0715

1. Tracking # 9160 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 96210146

2. Temperature of rep. sample or temp blank when opened: 5.0 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO..NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES..NO...NA

12. Did all container labels and tags agree with custody papers? YES..NO...NA

13a. Were VOA vials received? YES..NO..NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) mbm

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO..NA

16. Was residual chlorine present? YES..NO..NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) mbm

17. Were custody papers properly filled out (ink, signed, etc)? YES..NO...NA

18. Did you sign the custody papers in the appropriate place? YES..NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) mbm

I certify that I attached a label with the unique LIMS number to each container (intial) mbm

21. Were there Non-Conformance issues at login? YES NO Was a PIPE generated? YES NO #_____

this) MtA-122-040214- only one container received. mbm

12

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Mabbett	Lab PM: Hayes, Ken	Carrier Tracking No(s): 8034 0880 9160	COC No: 490-23468-8659.1	Loc: 490 50022
Client Contact: Christopher Mabbett	Phone:	E-Mail: ken.hayes@testamericainc.com		Page: Page 1 of 2	
Company: Mabbett & Associates, Inc.				Job #:	
Address: 5 Alfred Circle	Due Date Requested:				
City: Bedford	TAT Requested (days):				
State, Zip: MA, 01730					
Phone: 781 275 0050	PO #: Purchase Order Requested 4972				
Email: cmabbett@mabbett.com	WO #:				
Project Name: Proj. No. 1998002.329, Task 006 PCBs	Project #: 49002697				
Site:	SSOW#:				

Analysis Requested

Preservation Codes:

A - HCL	M -
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8082A - Standard PCBs (1016-1260)	Special Instructions/Note:
Preservation Code:						N	
MCA-5-040114	4/1/14	1410	G	Water		X	
M&A-104-040114	4/1/14	1150	G	Water		X	
M&A-110-040114	4/1/14	1310	G	Water		X	
M&A-111-040114	4/1/14	1500	G	Water		X	
M&A-112-040214	4/2/14	0915	G	Water		X	
M&A-113-040214	4/2/14	0940	G	Water		X	
M&A-116-040114	4/1/14	0925	G	Water		X	
M&A-121-040114	4/1/14	0956	G	Water		X	
M&A-122-040214	4/2/14	0800	G	Water		X	
M&A-124-040114	4/1/14	1750	G	Water		X	
M&A-126-040114	4/1/14	1645	G	Water		X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4-2-14 1200	Company	Received by:	Date/Time: 4.3.14 @ 0915	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.0°c

4/18/2014

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Mabbett	Lab PM: Hayes, Ken	Carrier Tracking No(s): 8034 0850 9160	COC No: 490-23468-8659.2
Client Contact: Christopher Mabbett	Phone:	E-Mail: ken.hayes@testamericainc.com		Page: Page 2 of 2
Company: Mabbett & Associates, Inc.				Job #:

Address: 5 Alfred Circle	Due Date Requested:	
City: Bedford	TAT Requested (days):	
State, Zip: MA, 01730		
Phone: 7812756050	PO #: Purchase Order Requested 4972	
Email: cmabbett@mabbett.com	WO #:	
Project Name: Proj. No. 1998002.329, Task 006 PCBs	Project #: 49002697	
Site:	SSOW#:	

Analysis Requested

8082A - Standard PCBs (1016-1260)

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2S03
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8082A	Special Instructions/Note:
			Preservation Code:		N	
MSA-301-040214	4/2/14	0730	G	Water	X	-12
FD-HTB-040114	4/1/14	1720	G	Water	X	13
				Water		
				Water		
				Water		
				Water		
				Water		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	4.2.14 1320			4.3.14 @ 0715	TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.0c

4/18/2014

Login Sample Receipt Checklist

Client: Mabbett & Associates, Inc.

Job Number: 490-50022-1
SDG Number: 1998002.329, Task 006

Login Number: 50022
List Number: 1
Creator: McBride, Mike

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-65115-1
TestAmerica Sample Delivery Group: 1998002.331
Client Project/Site: PCBs

For:
Mabbett & Associates, Inc.
5 Alfred Circle
Bedford, Massachusetts 01730

Attn: Christopher Mabbett

Authorized for release by:
11/12/2014 2:24:06 PM

Ken Hayes, Project Manager II
(615)301-5035
ken.hayes@testamericainc.com

Table of Contents

Sample Summary

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-65115-1	M & A-122-102814	Water	10/28/14 14:55	10/31/14 08:30
490-65115-2	M & A-124-102814	Water	10/28/14 15:10	10/31/14 08:30
490-65115-3	M & A-112-102814	Water	10/28/14 15:45	10/31/14 08:30
490-65115-4	M & A-111-102814	Water	10/28/14 14:30	10/31/14 08:30
490-65115-5	M & A-104-102814	Water	10/28/14 14:10	10/31/14 08:30
490-65115-6	M & A-116-102814	Water	10/28/14 13:00	10/31/14 08:30
490-65115-7	M & A-110-102814	Water	10/28/14 13:20	10/31/14 08:30
490-65115-8	M & A-113-102814	Water	10/28/14 15:50	10/31/14 08:30
490-65115-9	M & A-114-102814	Water	10/28/14 15:00	10/31/14 08:30
490-65115-10	M & A-126-102814	Water	10/28/14 14:45	10/31/14 08:30
490-65115-11	M & A-121-102814	Water	10/28/14 12:30	10/31/14 08:30
490-65115-12	MCA-5-102814	Water	10/28/14 13:05	10/31/14 08:30
490-65115-13	M & A-301-102914	Water	10/29/14 08:45	10/31/14 08:30

Job ID: 490-65115-1

Laboratory: TestAmerica Nashville

4

Narrative

Job Narrative
490-65115-1

Comments
No additional comments.

Receipt
The samples were received on 10/31/2014 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

GC Semi VOA
Method(s) 8082A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batches 203159 and 203837.

Method(s) 8082A: The following sample(s) required a dilution due to the nature of the sample matrix: M & A-113-102814 (490-65115-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batches 203159 and 203837.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

5

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Client Sample ID: M & A-122-102814
Date Collected: 10/28/14 14:55
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-1
Matrix: Water

6

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:04	1
PCB-1221	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:04	1
PCB-1232	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:04	1
PCB-1242	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:04	1
PCB-1248	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:04	1
PCB-1254	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:04	1
PCB-1260	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*76*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:04*	*1*
Tetrachloro-m-xylene	*81*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:04*	*1*

Client Sample ID: M & A-124-102814
Date Collected: 10/28/14 15:10
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-2
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:17	1
PCB-1221	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:17	1
PCB-1232	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:17	1
PCB-1242	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:17	1
PCB-1248	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:17	1
PCB-1254	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:17	1
PCB-1260	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*80*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:17*	*1*
Tetrachloro-m-xylene	*82*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:17*	*1*

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Client Sample ID: M & A-112-102814
Date Collected: 10/28/14 15:45
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-3
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:30	1
PCB-1221	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:30	1
PCB-1232	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:30	1
PCB-1242	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:30	1
PCB-1248	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:30	1
PCB-1254	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:30	1
PCB-1260	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*64*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:30*	*1*
Tetrachloro-m-xylene	*76*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:30*	*1*

Client Sample ID: M & A-111-102814
Date Collected: 10/28/14 14:30
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-4
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:43	1
PCB-1221	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:43	1
PCB-1232	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:43	1
PCB-1242	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:43	1
PCB-1248	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:43	1
PCB-1254	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:43	1
PCB-1260	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*72*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:43*	*1*
Tetrachloro-m-xylene	*79*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:43*	*1*

Client Sample ID: M & A-104-102814
Date Collected: 10/28/14 14:10
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-5
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:57	1
PCB-1221	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:57	1
PCB-1232	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:57	1
PCB-1242	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:57	1
PCB-1248	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:57	1
PCB-1254	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:57	1
PCB-1260	ND		0.431		ug/L		11/04/14 06:56	11/05/14 12:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*84*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:57*	*1*
Tetrachloro-m-xylene	*90*		*10 - 150*	*11/04/14 06:56*	*11/05/14 12:57*	*1*

Client Sample ID: M & A-116-102814
Date Collected: 10/28/14 13:00
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-6
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:10	1
PCB-1221	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:10	1
PCB-1232	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:10	1
PCB-1242	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:10	1
PCB-1248	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:10	1
PCB-1254	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:10	1
PCB-1260	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*71*		*10 - 150*	*11/04/14 06:56*	*11/05/14 13:10*	*1*
Tetrachloro-m-xylene	*72*		*10 - 150*	*11/04/14 06:56*	*11/05/14 13:10*	*1*

Client Sample ID: M & A-110-102814
Date Collected: 10/28/14 13:20
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-7
Matrix: Water

6

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:23	1
PCB-1221	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:23	1
PCB-1232	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:23	1
PCB-1242	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:23	1
PCB-1248	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:23	1
PCB-1254	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:23	1
PCB-1260	ND		0.431		ug/L		11/04/14 06:56	11/05/14 13:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*78*		*10 - 150*	*11/04/14 06:56*	*11/05/14 13:23*	*1*
Tetrachloro-m-xylene	*87*		*10 - 150*	*11/04/14 06:56*	*11/05/14 13:23*	*1*

Client Sample ID: M & A-113-102814
Date Collected: 10/28/14 15:50
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-8
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1120		ug/L		11/04/14 06:56	11/06/14 12:05	2500
PCB-1221	ND		1120		ug/L		11/04/14 06:56	11/06/14 12:05	2500
PCB-1232	ND		1120		ug/L		11/04/14 06:56	11/06/14 12:05	2500
PCB-1242	ND		1120		ug/L		11/04/14 06:56	11/06/14 12:05	2500
PCB-1248	4030		1120		ug/L		11/04/14 06:56	11/06/14 12:05	2500
PCB-1254	ND		1120		ug/L		11/04/14 06:56	11/06/14 12:05	2500
PCB-1260	ND		1120		ug/L		11/04/14 06:56	11/06/14 12:05	2500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*0*	*X*	*10 - 150*	*11/04/14 06:56*	*11/06/14 12:05*	*2500*
Tetrachloro-m-xylene	*0*	*X*	*10 - 150*	*11/04/14 06:56*	*11/06/14 12:05*	*2500*

Client Sample ID: M & A-114-102814
Date Collected: 10/28/14 15:00
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-9
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.446		ug/L		11/04/14 06:56	11/05/14 13:49	1
PCB-1221	ND		0.446		ug/L		11/04/14 06:56	11/05/14 13:49	1
PCB-1232	ND		0.446		ug/L		11/04/14 06:56	11/05/14 13:49	1
PCB-1242	ND		0.446		ug/L		11/04/14 06:56	11/05/14 13:49	1
PCB-1248	ND		0.446		ug/L		11/04/14 06:56	11/05/14 13:49	1
PCB-1254	ND		0.446		ug/L		11/04/14 06:56	11/05/14 13:49	1
PCB-1260	ND		0.446		ug/L		11/04/14 06:56	11/05/14 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*27*		*10 - 150*	*11/04/14 06:56*	*11/05/14 13:49*	*1*
Tetrachloro-m-xylene	*59*		*10 - 150*	*11/04/14 06:56*	*11/05/14 13:49*	*1*

Client Sample ID: M & A-126-102814
Date Collected: 10/28/14 14:45
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-10
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:02	1
PCB-1221	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:02	1
PCB-1232	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:02	1
PCB-1242	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:02	1
PCB-1248	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:02	1
PCB-1254	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:02	1
PCB-1260	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*47*		*10 - 150*	*11/04/14 06:56*	*11/05/14 14:02*	*1*
Tetrachloro-m-xylene	*69*		*10 - 150*	*11/04/14 06:56*	*11/05/14 14:02*	*1*

Client Sample ID: M & A-121-102814
Date Collected: 10/28/14 12:30
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-11
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:41	1
PCB-1221	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:41	1
PCB-1232	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:41	1
PCB-1242	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:41	1
PCB-1248	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:41	1
PCB-1254	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:41	1
PCB-1260	ND		0.446		ug/L		11/04/14 06:56	11/05/14 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*56*		*10 - 150*	*11/04/14 06:56*	*11/05/14 14:41*	*1*
Tetrachloro-m-xylene	*81*		*10 - 150*	*11/04/14 06:56*	*11/05/14 14:41*	*1*

Client Sample ID: MCA-5-102814
Date Collected: 10/28/14 13:05
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-12
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/04/14 06:56	11/05/14 14:55	1
PCB-1221	ND		0.431		ug/L		11/04/14 06:56	11/05/14 14:55	1
PCB-1232	ND		0.431		ug/L		11/04/14 06:56	11/05/14 14:55	1
PCB-1242	ND		0.431		ug/L		11/04/14 06:56	11/05/14 14:55	1
PCB-1248	ND		0.431		ug/L		11/04/14 06:56	11/05/14 14:55	1
PCB-1254	ND		0.431		ug/L		11/04/14 06:56	11/05/14 14:55	1
PCB-1260	ND		0.431		ug/L		11/04/14 06:56	11/05/14 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*47*		*10 - 150*	*11/04/14 06:56*	*11/05/14 14:55*	*1*
Tetrachloro-m-xylene	*83*		*10 - 150*	*11/04/14 06:56*	*11/05/14 14:55*	*1*

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Client Sample ID: M & A-301-102914
Date Collected: 10/29/14 08:45
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-13
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.431		ug/L		11/06/14 08:03	11/11/14 12:41	1
PCB-1221	ND		0.431		ug/L		11/06/14 08:03	11/11/14 12:41	1
PCB-1232	ND		0.431		ug/L		11/06/14 08:03	11/11/14 12:41	1
PCB-1242	ND		0.431		ug/L		11/06/14 08:03	11/11/14 12:41	1
PCB-1248	ND		0.431		ug/L		11/06/14 08:03	11/11/14 12:41	1
PCB-1254	ND		0.431		ug/L		11/06/14 08:03	11/11/14 12:41	1
PCB-1260	ND		0.431		ug/L		11/06/14 08:03	11/11/14 12:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*93*		*10 - 150*	*11/06/14 08:03*	*11/11/14 12:41*	*1*
Tetrachloro-m-xylene	*84*		*10 - 150*	*11/06/14 08:03*	*11/11/14 12:41*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 490-203159/1-A
Matrix: Water
Analysis Batch: 203580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 203159

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		11/04/14 06:56	11/05/14 11:38	1
PCB-1221	ND		0.500		ug/L		11/04/14 06:56	11/05/14 11:38	1
PCB-1232	ND		0.500		ug/L		11/04/14 06:56	11/05/14 11:38	1
PCB-1242	ND		0.500		ug/L		11/04/14 06:56	11/05/14 11:38	1
PCB-1248	ND		0.500		ug/L		11/04/14 06:56	11/05/14 11:38	1
PCB-1254	ND		0.500		ug/L		11/04/14 06:56	11/05/14 11:38	1
PCB-1260	ND		0.500		ug/L		11/04/14 06:56	11/05/14 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*68*		*10 - 150*	*11/04/14 06:56*	*11/05/14 11:38*	*1*
Tetrachloro-m-xylene	*72*		*10 - 150*	*11/04/14 06:56*	*11/05/14 11:38*	*1*

Lab Sample ID: LCS 490-203159/2-A
Matrix: Water
Analysis Batch: 203580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 203159

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	8.00	8.457		ug/L		106	23 - 139
PCB-1260	8.00	8.444		ug/L		106	36 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*80*		*10 - 150*
Tetrachloro-m-xylene	*85*		*10 - 150*

Lab Sample ID: MB 490-203837/1-A
Matrix: Water
Analysis Batch: 205021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 203837

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		11/06/14 08:03	11/11/14 12:16	1
PCB-1221	ND		0.500		ug/L		11/06/14 08:03	11/11/14 12:16	1
PCB-1232	ND		0.500		ug/L		11/06/14 08:03	11/11/14 12:16	1
PCB-1242	ND		0.500		ug/L		11/06/14 08:03	11/11/14 12:16	1
PCB-1248	ND		0.500		ug/L		11/06/14 08:03	11/11/14 12:16	1
PCB-1254	ND		0.500		ug/L		11/06/14 08:03	11/11/14 12:16	1
PCB-1260	ND		0.500		ug/L		11/06/14 08:03	11/11/14 12:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*108*		*10 - 150*	*11/06/14 08:03*	*11/11/14 12:16*	*1*
Tetrachloro-m-xylene	*87*		*10 - 150*	*11/06/14 08:03*	*11/11/14 12:16*	*1*

Lab Sample ID: LCS 490-203837/2-A
Matrix: Water
Analysis Batch: 205021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 203837

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	8.00	6.338		ug/L		79	23 - 139

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 490-203837/2-A
Matrix: Water
Analysis Batch: 205021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 203837

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1260	8.00	7.091		ug/L		89	36 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*70*		*10 - 150*
Tetrachloro-m-xylene	*82*		*10 - 150*

7

QC Association Summary

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

GC Semi VOA

Prep Batch: 203159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65115-1	M & A-122-102814	Total/NA	Water	3510C	
490-65115-2	M & A-124-102814	Total/NA	Water	3510C	
490-65115-3	M & A-112-102814	Total/NA	Water	3510C	
490-65115-4	M & A-111-102814	Total/NA	Water	3510C	
490-65115-5	M & A-104-102814	Total/NA	Water	3510C	
490-65115-6	M & A-116-102814	Total/NA	Water	3510C	
490-65115-7	M & A-110-102814	Total/NA	Water	3510C	
490-65115-8	M & A-113-102814	Total/NA	Water	3510C	
490-65115-9	M & A-114-102814	Total/NA	Water	3510C	
490-65115-10	M & A-126-102814	Total/NA	Water	3510C	
490-65115-11	M & A-121-102814	Total/NA	Water	3510C	
490-65115-12	MCA-5-102814	Total/NA	Water	3510C	
LCS 490-203159/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 490-203159/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 203580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65115-1	M & A-122-102814	Total/NA	Water	8082A	203159
490-65115-2	M & A-124-102814	Total/NA	Water	8082A	203159
490-65115-3	M & A-112-102814	Total/NA	Water	8082A	203159
490-65115-4	M & A-111-102814	Total/NA	Water	8082A	203159
490-65115-5	M & A-104-102814	Total/NA	Water	8082A	203159
490-65115-6	M & A-116-102814	Total/NA	Water	8082A	203159
490-65115-7	M & A-110-102814	Total/NA	Water	8082A	203159
490-65115-9	M & A-114-102814	Total/NA	Water	8082A	203159
490-65115-10	M & A-126-102814	Total/NA	Water	8082A	203159
490-65115-11	M & A-121-102814	Total/NA	Water	8082A	203159
490-65115-12	MCA-5-102814	Total/NA	Water	8082A	203159
LCS 490-203159/2-A	Lab Control Sample	Total/NA	Water	8082A	203159
MB 490-203159/1-A	Method Blank	Total/NA	Water	8082A	203159

Prep Batch: 203837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65115-13	M & A-301-102914	Total/NA	Water	3510C	
LCS 490-203837/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 490-203837/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 203926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65115-8	M & A-113-102814	Total/NA	Water	8082A	203159

Analysis Batch: 205021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65115-13	M & A-301-102914	Total/NA	Water	8082A	203837
LCS 490-203837/2-A	Lab Control Sample	Total/NA	Water	8082A	203837
MB 490-203837/1-A	Method Blank	Total/NA	Water	8082A	203837

Lab Chronicle

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Client Sample ID: M & A-122-102814

Lab Sample ID: 490-65115-1
Matrix: Water

Date Collected: 10/28/14 14:55
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	203580	11/05/14 12:04	MGH	TAL NSH

Client Sample ID: M & A-124-102814

Lab Sample ID: 490-65115-2
Matrix: Water

Date Collected: 10/28/14 15:10
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	203580	11/05/14 12:17	MGH	TAL NSH

Client Sample ID: M & A-112-102814

Lab Sample ID: 490-65115-3
Matrix: Water

Date Collected: 10/28/14 15:45
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	203580	11/05/14 12:30	MGH	TAL NSH

Client Sample ID: M & A-111-102814

Lab Sample ID: 490-65115-4
Matrix: Water

Date Collected: 10/28/14 14:30
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	203580	11/05/14 12:43	MGH	TAL NSH

Client Sample ID: M & A-104-102814

Lab Sample ID: 490-65115-5
Matrix: Water

Date Collected: 10/28/14 14:10
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	203580	11/05/14 12:57	MGH	TAL NSH

Client Sample ID: M & A-116-102814

Lab Sample ID: 490-65115-6
Matrix: Water

Date Collected: 10/28/14 13:00
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	203580	11/05/14 13:10	MGH	TAL NSH

Lab Chronicle

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Client Sample ID: M & A-110-102814

Lab Sample ID: 490-65115-7
Matrix: Water

Date Collected: 10/28/14 13:20
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	203580	11/05/14 13:23	MGH	TAL NSH

Client Sample ID: M & A-113-102814

Lab Sample ID: 490-65115-8
Matrix: Water

Date Collected: 10/28/14 15:50
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			140 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		2500	140 mL	5 mL	203926	11/06/14 12:05	MGH	TAL NSH

Client Sample ID: M & A-114-102814

Lab Sample ID: 490-65115-9
Matrix: Water

Date Collected: 10/28/14 15:00
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			140 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	140 mL	5 mL	203580	11/05/14 13:49	MGH	TAL NSH

Client Sample ID: M & A-126-102814

Lab Sample ID: 490-65115-10
Matrix: Water

Date Collected: 10/28/14 14:45
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			140 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	140 mL	5 mL	203580	11/05/14 14:02	MGH	TAL NSH

Client Sample ID: M & A-121-102814

Lab Sample ID: 490-65115-11
Matrix: Water

Date Collected: 10/28/14 12:30
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			140 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	140 mL	5 mL	203580	11/05/14 14:41	MGH	TAL NSH

Client Sample ID: MCA-5-102814

Lab Sample ID: 490-65115-12
Matrix: Water

Date Collected: 10/28/14 13:05
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203159	11/04/14 06:56	ET	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	203580	11/05/14 14:55	MGH	TAL NSH

Lab Chronicle

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Client Sample ID: M & A-301-102914
Date Collected: 10/29/14 08:45
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65115-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			145 mL	5 mL	203837	11/06/14 08:03	MDW	TAL NSH
Total/NA	Analysis	8082A		1	145 mL	5 mL	205021	11/11/14 12:41	MGH	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

9

Method Summary

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

10

Certification Summary

Client: Mabbett & Associates, Inc.
Project/Site: PCBs

TestAmerica Job ID: 490-65115-1
SDG: 1998002.331

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	200010	12-09-14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM


490-65115 Chain of Custody

Cooler Received/Opened On : 10/30/2014 @ ~~0857~~ 0850

1. Tracking # 9730 (last 4 digits, FedEx)

Courier: Lab Courier IR Gun: 18290455

2. Temperature of rep. sample or temp blank when opened: 2.4 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO (NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 2 Front

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) ____

7. Were custody seals on containers: YES (NO) and Intact YES NO (NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES...(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) EM

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) EM

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) EM

I certify that I attached a label with the unique LIMS number to each container (intial) EM

21. Were there Non-Conformance issues at login? (YES)...NO Was a NCM generated? (YES)...NO...#____

12

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 11/28/12

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Phone (615) 726-0177 Fax (615) 726-3404

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

11/12/2014

Client Information	Sampler: M. Horton / K. Sears	Lab PM: Hayes, Ken	Carrier Tracking No(s): Fed Ex	COC No: 490-29954-10796.1
Client Contact: Christopher Mabbett	Phone: (774) 254-4771	E-Mail: ken.hayes@testamericainc.com		Page: Page 1 of 2
Company: Mabbett & Associates, Inc.				Job #:
Address: 5 Alfred Circle	Due Date Requested:			
City: Bedford	TAT Requested (days):			
State, Zip: MA, 01730				
Phone: (781) 275-6050 x311	PO #: 5038			
Email: cmabbett@mabbett.com	WO #:			
Project Name: PCBs 5038	Project #: ~~49002697~~ 1998002-331			
Site: Bodycote	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A - Standard PCBs (1016-1260)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N	N	N		
M&A-122-102814	10/28/14	1455	G	Water	N	N	X		
M&A-124-102814	10/28/14	1510	G	Water			X		Loc: 490
M&A-112-102814	10/28/14	1545	G	Water			X		65115
M&A-111-102814	10/28/14	1430	G	Water			X		
M&A-104-102814	10/28/14	1410	G	Water			X		
M&A-116-102814	10/28/14	1300	G	Water			X		
M&A-110-102814	10/28/14	1320	G	Water			X		
M&A-113-102814	10/28/14	1550	G	Water			X		Highly contaminated with TCE
M&A-114-102814	10/28/14	1500	G	Water			X		
M&A-126-102814	10/28/14	1445	G	Water			X		
M&A-121-102814	10/28/14	1230	G	Water	↓	↓	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 10/29/14 1100	Company: Mabbett	Received by: FedEx	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10-30-14 830	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 24

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Phone (615) 726-0177 Fax (615) 726-3404

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

11/12/2014

Client Information	Sampler: M. Horton	Lab PM: Hayes, Ken	Carrier Tracking No(s): FedEx	COC No: 490-29954-10796.1
Client Contact: Christopher Mabbett	Phone: (774) 254-4771	E-Mail: ken.hayes@testamericainc.com		Page: Page 2 of 2
Company: Mabbett & Associates, Inc.				Job #:
Address: 5 Alfred Circle	Due Date Requested:			
City: Bedford	TAT Requested (days):			
State, Zip: MA, 01730				
Phone: (781) 275-6050 x 311	PO #: 3			
Email: cmabbett@mabbett.com	WO #:			
Project Name: PCBs 5038	Project #: 49002697			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A - Standard PCBs (1016-1260)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N	N	X		
MCA-5-102814	10/28/14	1305	G	Water	N	N	X		
MCA-301-102914	10/29/14	0845	G	Water	N	N	X		
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

Loc: 490
65115

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10/29/14 1100	Mabbett	FedEx		
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10-30-14 930	Company TAN
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 2.4

Login Sample Receipt Checklist

Client: Mabbett & Associates, Inc.

Job Number: 490-65115-1
SDG Number: 1998002.331

Login Number: 65115
List Number: 1
Creator: Abernathy, Eric

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	